A VOYAGE TO The World OF CARTESIUS.

Written Originally in French.

Translated into English

By *T. TAYLOR*, M. A.

Of *Magdalen Colledge* in *Oxford*.

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DEVON & EXETER INSTITUTION

Utopia
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To my Friend

JAMES LUDFORD

OF

ANSELY, *Esq;*

SIR,

THO' all my Services and Respects necessarily devolve on you, as on the Inheriter of your Brothers Interests, yet you may lay a more immediate Claim to my Esteem and Observance, from your own repeated Favours and Obligations: In so much that I am bound by a double Tye of Gratitude, on all Occasions, to manifest my Resentments of them, and think my self unworthy privately to enjoy the Happiness, unless I declare to the World how much I am Oblig'd to you. You must needs;

Sir, think me ſincere in my Intentions, when, upon making ſo ſmall and inſignificant a Payment, I am willing to call the Publick to witneſs, I am infinitely ſtill your Debtor. I confeſs the opportunity I have had of improving my Talent by the Advantage of your Brothers Tuition and Inſtructions, might (you may juſtly think) have enabled me to offer you an Original inſtead of a Tranſlation, and the Tranſcribing his Character and Senſe, might rather have been expected than my Authors. But for my Apology, I muſt plead my Unhappineſs in the loſs of him, which yet is no more peculiar to me than to the whole Society of Magdalen-College, *whereof he was a Member. He is there remembred as a Perſon in whom the Scholar and Gentleman were ſo well met, that neither of them ſpoil'd the other: He was Learn'd without Arrogance; Genteel without Vanity; Witty without Affectation; Well-bred, Airy, Gay and Eaſy, yet never relax'd his Mind ſo far as to abate in any part of its real Improvement. And, though to inſtance the Graces and extraordinary Endowments of his Body, would be thought perhaps to derogate from thoſe of his Mind, and to make the Luſtre of his Vertues ſtand indebted to his Perſon, yet I can not but think ſo curious an Habita-*

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tion was deſign'd to anſwer the Merit of the Inhabitant, whoſe outward Structure ſhould repreſent the Quality of the Owner. But I do not mean to inlarge on his Character, for that is Work that muſt be wrought extreamly Fine, or methinks 'tis Nauſeous, even on the Dead; and, whatever I may pretend to the contrary, will look more like a Complement to your ſelf, than Juſtice to his Memory. The little I have ſaid will ſuffice, I hope, to ſhew that what I here offer you is not altogether unſuitable to his or your Genius, wherein Philoſophy is diveſted of the Stiffneſs and Moroſneſs of the Schools, and has aſſum'd the Garb and Air of a more Ingenuous Education than ordinary. Here is ſomething, Sir, that will entertain your Philoſophical Minutes, and ſomething that will quicken thoſe deſign'd for your Diverſion; and all ſo mixt and temper'd, that the Author ſeems ſtill to have kept his Eye on thoſe two main ends, Pleaſing and Inſtructing. Philoſophy by this Method is become a la mode *amongſt the Women of greateſt Quality in* France, *who pride themſelves more in being accounted Partiſans of a Sect, than Leaders in Dreſs and Faſhion. And we may preſume that the Power and Force of Imitation will reach the Minds of our* Engliſh *Ladies, when Learning ſhall be ſet off with the Allurements*

and Delight they meet with in reading a Romance. To provoke them therefore I have adventur'd upon this Tranſlation, notwithſtanding the Prohibition of French *Commodities: But it is not from their Judgments I expect the Approbation of my Endeavours: My chief Deſign was to pleaſe you; And if I ſhall in the leaſt ſucceed in that Attempt, it will be abundant Honour and Satisfaction to*

Sir,

Magd. Coll. Oxon. May, 7. 1692.

Your moſt oblig'd, and moſt humble Servant,

T. Taylor.

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ADVERTISEMENT

OF THE

AUTHOR.

IT is almoſt three years ſince this Book was in a capacity of appearing; and if it were of any Concern to convince the World of this, it might be done by the Teſtimony of Perſons unſuſpected in this Affair; and ſuch as would merit Credit when they determin'd it in favour of the Author. The Reader may perceive it in two or three places, that have ſome reference to thoſe times, which were not thought neceſſary to be alter'd. Such is the War betwixt *M. Arnauld* and *Malebranche* Father of the Oratory, of which there is an account given, without any mention of the Ceſſation of Arms, or any pretence of a Truce which hath been ſince concluded. But it may be preſum'd not amiſs, to adviſe ſuch as think themſelves not obligd to ſo exact an Inquiry into things of that Nature, that the Map of the Moon, whoſe

Hemiſphere is deſcrib'd at large in the Voyage to the World of *Deſcartes*, is no new thing, and that *Plato*, *Ariſtotle*, *Gaſſendus*, *Merſennus*, &c. are not Inhabitants of thoſe Lands and Countries lately diſcover'd in that vaſt Continent, nor, of thoſe wherewith the Author of this Book hath inlarg'd the Map. Our Aſtronomers have been acquainted with thoſe places long ago, and have eſtabliſh'd Principalities on behalf of thoſe great Men whoſe Names they bear. This may be ſeen in the *Almageſtus* of *Ricciolus*, and in many other Mathematicians, who write Obſervations on the Eclipſes of the Moon.

Some may be farther inquiſitive to demand, why *Father Merſennus* had the Honour to be made *Carteſius* his Partner, in the framing of his World, rather than ſo many other famous *Carteſians* he might have made choiſe of. To which I return, that *Father Merſennus* had the Preference, not only on the account of the particular Eſteem and Love *Carteſius*, as well as other excellent Philoſophers of his time, had for him, but becauſe he was the almoſt only Gentleman that was in a condition to be an Aſſiſtant in that great Enterprize when he began it; the other Ingenious *Carteſians* having not left our World till after him.

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A General View

Of the whole

W O R K.

LUCIAN, *in his Entry upon his true Hiſtory, hath taken the moſt advantagious Method that poſſibly could be thought on. He proclaims forthwith to his Reader that whatever he ſhall ſay is falſe. After which giving his Imagination ſwing, he loads the Paper with all the Extravagancies his Fancy can ſupply him with. By this means he ſecures himſelf from that grand Concern which attends all ſorts of Compoſition, and conſiſts in preſerving probability in the Narration; an Obligation otherwiſe indiſpenſable to every Writer that pretends to give Relations. The worſt of that* Exordium *is, it cannot be made uſe of twice, and that is begins to be Thred-bare, as ſoon*

soon as it ceases to be intirely new. It is a Liberty the Publick would never pardon in any one but him that had the good fortune first to light upon it: A gentile turn that no one can imitate without passing for a Plagiary, and a Grace of Wit that admits of nothing surprizing or agreeable in a second Indeavour. That Consideration joyn'd with the difficulty which may be easily gues's'd, I had to preserve the strict Law of probability in my History, will persuade those that shall read it, that I envyed Lucian, *more than once, this his so happy Expedient: Nor can I but acknowledge the same. Yet I must add, that a second Consideration would inevitably have determin'd me to a different Choice, although decency would have allow'd me to make use of the former. I am a Philosopher: And the Profession I pretend to, bars all admittance unto such a management. The Character of a Philosopher is always to speak Truth, or to think he does; at least indeavour to be thought to speak it. For me to devest my self of all gayety of Humour, and then to affect it (to follow the Example of the greatest Enemy the Philosophers have known) would have been poorly to support a Quality, I extreamly value my self upon. So that I should be cautious of using the like Preamble, and acquainting my Readers that all they were to expect of me should be false. I certify them therefore from this time forward that I have a quite contrary design, and that I mean to set off my History with an Air of Truth, such as may be able to persuade the most Incredulous, did they lay by Prejudice in the reading of it, that what I say is most undoubtedly true. But such is the Nature of Prejudice and Prepossession, that after all the pains I have taken to appear credible, I am conscious not-*

notwithſtanding I ſhall not be believ'd. Let it be how it will: For after all I will by no means offer violence to the Judgment of my Readers. Now ſee in few Words the deſign of the Work.

I therein relate the Particulars of a Voyage which I made to the World of Carteſius. *I begin the Voyage very advantagiouſly, upon an occaſion that Fortune preſented me, and which ſeems worthy to be related. Through the whole Thred of the Hiſtory, as I fall in with Emergencies, I explain with as little difficulty and as pleaſantly as the Subject will bear, the moſt principal Points of* Carteſius *his Philoſophy. I examine many of them in the way, and refute the greateſt part of them in a manner clear, as I think, and intelligible enough; and which commonly has in it ſomething new and unreceiv'd. I have made it my buſineſs to diverſify and enliven a Subject naturally dry and melancholy, as well by the variety of Accidents, which give me occaſion to digreſs upon them, as by ſome peculiar and not incurious Inſtances of the Hiſtory of* Carteſianiſm: *And likewiſe with ſome brisk and warm Diſcourſes of ſuch Gentlemen, as no one will be uneaſy to hear Diſpute. To conclude, my laſt and moſt principal Buſineſs to the Examination and Diſcuſſion of the general Syſtem of* Carteſius *his World, and his managery of the chiefeſt Parts of it, as he propoſes it in his* Book of Principles, *and in that which is Intituled,* A Treatiſe concerning Light, *or the World of* M. Deſcartes, *which he mentions ſo often in his Letters to* Father Merſennus, *but was not printed till after his death. And I doubt not, in that diſcuſſion, to eſtabliſh this one Propoſition, that hath been often advanc'd, but ſtill repuls'd, and ſtill, I*

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am confident, will be, as a Paradox to many, That there is ſcarce any Philoſophical Hypotheſis more unjuſt and incoherent, or whoſe Concluſions have leſs connexion with its Principles, than that of Carteſius.

That Propoſition, I ſay, hath always ſeem'd a Paradox, becauſe it thwarts the generally receiv'd Opinion of that Philoſophy. No one will deny but that ſome of his Principles being but meer Suppoſitions without Proof, the Mind cannot find that ſatisfaction it demands: But what they ſtand upon is, That theſe Suppoſitions being once receiv'd, all the reſt doth follow in ſo direct a Line, in ſo great order and perſpicuity, that the evidence of the Conſequences, expanding it ſelf (as I may ſay) upon the Premiſes, the mind begins of its own accord to imbrace for Truths, what were before propos'd as bare Suppoſitions.

This may be true of ſome parts of his Philoſophy, and particularly of thoſe wherein he treats of the Nature of ſome Senſible Qualities, in which a Man muſt almoſt be forc'd to acquieſce, that ſhall read them without Prepoſſeſſion. But I am of opinion it is falſe in reſpect of the general Conſtructure of his World, and the Conſequences he draws from it. 'Tis this part of his Philoſophy which I ſhall more throughly examine, and it is this of all other, that hath hitherto beſt eſcap'd the Cenſure. Plenty of Objections have been made againſt his Metaphyſicks, *againſt the New Demonſtrations, he hath pretended to give, for the exiſtence of a Deity, his diſtinction of the Soul and Body, his Syſtem of Light, his Rules of Motion,*

as also those concerning Reflection and Refraction. Scarce any yet have given him disturbance upon the Hypothesis of his Vortexes, *which is notwithstanding the Foundation of all he says touching the motion of the Planets, the ebbing and flowing of the Sea, the gravity and levity of Bodies; and of his whole System concerning Light, of which he himself has been so very fond.*

I will not say but they have augmented the Difficulties upon each of these last Heads, since a great many have attack'd him thereupon: But I only say they have seldom or never examin'd them with relation to his general Hypothesis, by which I undertake to shew, that commonly what he writes of particular Matters, is inconsistent with the whole; and it is mostly in that, the Relation of my Voyage hath something altogether new.

For what remains, if I shall succeed in this last Affair, which was almost the only occasion of this Enterprize, I shall glory to have been the most mischievous Adversary Cartesius *ever met with. For that which distinguishes that great Man from all the other Philosophers, is not the lucky Explication of some particular Phenomena's in Nature (that Praise is shar'd by an abundance of Philosophers, both Ancient and Modern) but that vastness of Capacity, and extent of Genius, whereby he could frame an intire System of the World, so well contriv'd, that taking for granted a few Principles most simple and easy to be understood, he could give a reason for all the Occurrencies of Nature. It is that Attempt, as*

most

moſt believe, by which he obtain'd his end, and which hath procur'd him ſo much Honour and Reputation. To ſhew then his Syſtem to be full of Contradictions, that it is incoherent, that one Suppoſition deſtroys another, is to undertake him in his ſtrongeſt hold, and to wound him in the part that is moſt ſenſible. We ſhall ſee in the purſuit of the Hiſtory what ought to be our Thoughts of it.

E R-

ERRATA.

PH*æ*nomena's read *Phænomena*, where-ever it is. p. 2. l. 15. r. *lies*. ib. l. 35. r. *ſcouſed*. p. 18. l. 9. r. *the*. p. 19. l. 8. r. *humors, all thoſe Natural Functions, and all the*. ib. l. 27. r. *Britanny*. l. 29. r. *of her*. p. 21. l. 9. r. *laxed*. p. 23. l. 15. r. *Vortex*. p. 29. l. 25. r. *meet me at*: l. 34. r. *ſhe gave*: l. 36. r. *ſad*. p. 44. l. 2. *imagines*: l. 21. r. *utmoſt*. p. 45. l. 16. r. *meriſed*. p. 46. l. 16. r. *murder*. p. 51. l. 2. r. *talked*. p. 58. l. 5. r. *could*. p. 64. l. 2. r. *in one*: l. 25. dele *not*. p. 69. l. 26. r. *Euripus*. p. 73. r. *Caliſthexes*. p. 76. l. 5. dele *and*: l. 7. r. *Venturer*. p. 77. r. *unimpower'd*. p. 79. l. 6. dele *we*. p. 83. l. 3. r. *and*. p. 86. l. 8. r. *Placart*. p. 100. l. 4. r. *kaiſh*: l. 17. r. *Galileus*. p. 112. l. 30. r. *hairs*. p. 118. l. 15. r. *Peripapeticiſm*. p. 121. l. 12. r. *met*. p. 122. l. 3. r. *memoir*. p. 131. l. 34. r. *clawing*. p. 141. l. 25. r. *alone*. p. 142. l. 20. after *to* inſert *be*. p. 146. l. 10. r. *conceiving*. p. 147. l. 12 r. *neeled*. p. 153. l. 21. r. *Elaterium*. p. 155. l. 25. r. *ſell*. p. 156. l. 19. r. *ſtock'd*. p. 158. l. 9. dele *them*. p. 161. l. 4. r. *clearing*: l. 27. r. *not truly*. p. 162. l. 7. *ſuppos'd*; *to the end that*. p. 173. l. 1. r. *or*. p. 179. l. 18. r. *Vices*. p. 182. l. 31. r. *Des Arques*. p. 163. l. 9. r. *Tonques*. p. 193 l. 35. r. *petty*. p. 201. l. 6. r. *part*: l. 34. r. *Port*. p. 211. l. 12. r. *conſiſts*. p. 220. l. 19. r. *Wreck*: l. 21. r. *diſſipated*. p. 245. l. 31. r. *reſiſt*. p. 259. l. 19. dele *more*.

BOOKS Printed for and ſold by Tho. Bennet, *at the* Half-Moon *in* S. *Paul's* Church-yard.

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A

A VOYAGE TO The World of Cartesius.

PART. I.

IT fares with the *World of Monſieur Deſcartes*, as with other lately diſcovered Lands, whereof ſuch different Accounts are given, as often contradict one another: Scarce Mention was made of this *New World*, but an infinite Number of *French*, *Engliſh* and *Dutchmen* reſolve to go ſee it. The *Spaniard*, however zealous for new Diſcoveries, underſtanding it was barren of Mines of Gold and Silver, of Indigo and Ginger, ſeemed not much concerned about it: Wherefore thoſe that had moſt contributed unto it were not a little pleaſed, as believing, they had no Reaſon to apprehend the *Inquiſition*'s coming there to diſturb them. Among other

Things in that World the *Earth* takes a Turn about the *Sun*, as in that of *Copernicus*: And it is known that *M. Deſcartes* hath more than once, on that occaſion, reflected on the Misfortune of poor *Galileus*. I cannot tell, but it may be on his Account he hath taken ſo much Pains to prove this Paradox, That the *Earth* ſtands ſtill, though at the ſame Time it is carried about the *Sun* by that Luminary's *Vortex*. Let it be how it will, many of thoſe that give out they have beſt examined that Country, have made their Relations of it, but ſo differently, that a Man can ſcarce yet determine what he muſt believe: If you will credit one Party, they'll tell you, It is no *World* at all, but a perfect *Chaos*: That all lie in Diſorder, and wild Confuſion: That 'tis impoſſible for a Man to turn himſelf in it: That there is neither Light nor Colours, neither Heat nor Cold, Drought nor Moiſture: That Plants and Animals *there* don't live. There you have not only Liberty, but poſitive Orders to doubt of every thing in Nature. Some there ſhall be that will diſpute you out of the Name of a Man; though you have a Face like other Men; though you be made up of Fleſh and Bone as they; though you Walk, and Eat, and Sleep, and, in a Word, perform all the Natural Functions of a Man; yet, I ſay, there are thoſe that ſhall conteſt that Title with you, until having converſed you, and underſtood you ſpeak *conſequentially*, they ſhall be convinced that you have *Reaſon*.

Deſc. tom. 2. lett. 43, 75.

Part. 3. pr. n. 26.

The *Inhabitants* look Proud and Scornful, and have not the leaſt Reſpect for Antiquity. *Ariſtotle*, eſpecially is ſcouled in all Companies, and upon all Occaſions, by them, being look'd upon

upon as a Vain Babler, and an *Antique* Teller of Dreams. It is ſaid, There is neither good *Chriſtian* nor good *Catholick* there, ſince they tamper with Principles too Delicate and Dangerous, in Matters relating to Religion. No Body can tell what to make of their Belief of the Creation of *Our World*, the Production of Matter and the Providence of God; who, with them, had no other Care upon him than to order the Cubical Particles of Matter to whirl about their Center: After which he might ſit Idle and Unconcerned, ſince all the reſt could be managed without the leaſt of his Aſſiſtance.

On the other Side, we are aſſured, A moſt excellent Conduct ſhines through the whole Compoſition; That all is admirably contrived, and founded upon the Rules and Laws of Nature: That this *World* is indeed disburthened of an infinite Swarm of *Accidents*, *Qualities*, and *Intentional Species*, as of an unprofitable Lumber, wherewith the *Philoſophers* have imbroiled and incumbred ours: But yet, notwithſtanding it cannot be deny'd, but the Senſes are ſubject to the ſame Impreſſions there as here, only with this Difference, that the Cauſes are more acknowledged, and better explain'd.

As to the Point of Religion, nothing ſeems more juſtifiable than the Apology of theſe *Gentlemen*, which perhaps ſome have ingaged too inconſiderately for an Affair of that Weight and Moment. Can we apprehend a greater *Idea* of God Almighty, than that which *M. Deſcartes* hath given? An Idea that he derived not from the Viſible Creatures, that ſleight and faint Ray of an infinitely perfect Being; but which his Mind found impreſſed upon it ſelf, and which

left no room for him to doubt of the Existence of a Sovereign Being, though he possessed neither Heaven nor Earth, nor any Body, nor indeed any other Soul than *his*: Can the Omnipotence of a Deity be advanced to a more transcendent Degree than he hath done it? God, according to him, can cause, That Two and Three shall not make Five; That four Sides shall not be requisite to make a Square; That the Whole shall be no bigger than One of its Parts; Effects that other *Philosophers* never scruple to place out of the Reach of the God-head. But has not an Author of a little Piece, called, *A Letter wrote to a Learned Jesuite*, clearly shewn, That 'tis *Descartes World* that is described in the first Chapter of *Genesis*? Another Book hath since been publish'd in *Holland*, with the Title of *Cartesius Mosaisans*, and is to the same effect. The Author of the Treatise concerning *The Influence of the Stars*, describes the End of the World upon *Descartes* his Hypothesis. Monsieur *Scottanus*, in a late Apology, that he offered for *M. Descartes*, against those that Endeavoured to render him obnoxious to the Suspicion of Atheism, observes to us the Respect he had for Religion, certifying us, That one of his Reasons for the reducing his Meditations to the Number of *Six*, was the Consideration of the *Six Days* which God imployed in the Creation of the World. If we may credit *Father Mersennus*, a Learned and Noted *Minim*, and an intimate Acquaintance of *Descartes*, we shall find nothing of a more Christian Temper, and that inspires us more ravishingly with the Love of God than *Descartes Philosophy*. In short, there is nothing more edifying than the Letter

that

that *Philosopher* wrote to the *Sorbon Doctors*, in dedicating his *Meditations* to them; which is so true, that not long since, a Friend of mine, not wont to be very Nice in those Matters, having read by chance the Letter at my House, which touched him; and finding farther the Title of *Meditations* in the Front of the Work, he seriously entreated me to lend him that Godly Book, to entertain his Devotions during *Passion Week*.

This so strange Variety of Opinions, and Relations counter to one another, of *a World*, otherwise of no little Renown, provoked my Curiosity, and induced me to be convinced of the Truth or Falsity of the Reports, in my own Person. All the Difficulty was to find a Guide to conduct me to a Country, to which there was no Road passable either for Horse or Foot, for Coach or Barge, by Land or Sea: But presently after my Resolve, I was happily favoured with the most lucky Occasion that could be wish'd, for the undertaking my Voyage with all the Pleasure and Ease imaginable. Having sojourned some Months in a Country Town, I strook up Acquaintance with an *Old Standard*, of about eighty Years, a Man of Parts, and that formerly had conversed much with *M. Descartes*. That Commerce had begot in him an unaccountable Zeal for the Tenets of that *Philosopher*, and exasperated him to declaim against the Method and Opinions of the School, the Prejudices of Childhood, and taught him to make external Elogies on the *Cartesian Philosophy*. He had so given himself up to this Opinion, that he could no ways suffer, in Point of Philosophy, any one to deviate never so little from it. In a Con-

ference that we had together upon such sort of Things, I desired to know if he kept up his Correspondence with any *Cartesians* of Worth and Reputation. No, (said he) I have broke with all Sorts of Persons that call themselves by that Name. I can no longer find among them that Zeal and Observance the first *Cartesians*, without Reserve attributed to that great Man. Every one now a days builds Systems according to his own Humor, and allows himself the Liberty of Adding or Retrenching what he pleases in the Platform *M. Descartes* hath laid; which is a concern of that critical Nature as cannot be once touch'd without spoiling the whole. Since the Death of the Famous *M. Chersilier*, I have forbore writing to any single Person, for I am perswaded, That the pure and unmixt *Cartesianism* was buried with him.

You Gentlemen (*reply'd I*) are of a strange Constitution. All the Prefaces of your Books are fill'd with Invectives and Raileries, against those who implicitely espouse the Sentiments of an Author, and profess they will never desert him. It looks as if you, and the rest of the new Philosophers, had banded together in an offensive Confederacy, to make continual War upon the Followers of *Aristotle* on that Account; and at the same time you fall into the same Error for which ye reproach them, and are an hundred times more bigotted to your *Descartes*, than they to *Aristotle*. For my part, I know not how to blame the Conduct of those that are somewhat moderate, which you are so enrag'd against. If their Reason hath discover'd to them another Path than what *M. Descartes* trod in, why are you angry if they follow it? *Aristotle* held Possession

a long

a long time, and reign'd abſolute Monarch in Philoſophy. The Preſcription and Vaſſalage of ſeveral Ages, confirm'd his Title of Prince of Philoſophers. *Deſcartes* is a Rebel, who durſt encourage a Party againſt his Prince: What Right has he to demand a greater Submiſſion unto him, than he was willing to allow to *Ariſtotle?*

Becauſe (*anſwer'd he*) Truth and Reaſon are manifeſtly on his ſide. That, reply'd I, is exactly the firſt ſtep Rebellion ever makes, to inforce the juſtice of its Cauſe, and proclaim the publick Welfare does depend upon it. But notwithſtanding Sir (*purſu'd I*) I am more inclin'd to Neutrality in this Affair than you imagine. I have determin'd to dive to the bottom of *Deſcartes*'s Philoſophy, of which I have, as yet, but a dark and confus'd Knowledg, having never ſtudied him in his own Works, but in the Books of his Diſciples, as ſoon as they appear'd, and that irregularly, and without Method. But as I am oblig'd to leave this Country very ſpeedily, and have but a ſhort time to advantage my ſelf by your Ability in this Affair, therefore it was that I enquir'd, Whether you had any Communication of Letters, or Friendſhip with any good *Carteſian* of *Paris*, to whoſe Acquaintance you might recommend me, and who would be willing to inſtruct a Scholar ſo apt and forward as I pretend to be?

That Propoſal extreamly inſpirited my *old Gentleman*, and I perceiv'd a ſudden Joy diffus'd it ſelf all over his Countenance. Ever ſince I knew you (*ſaid he*, taking me by the Hand) I have obſerv'd in you a paſſionate Concern for Truth; which is the beſt, and firſt Diſpoſition

Deſcartes requires to attain unto it. Trouble not your ſelf, you have ſtill two Months good, which you muſt ſtay with me; and that's as much time as is required. I ſhall in a little time receive ſome News from *M. Deſcartes*, whereupon wee'll take ſuch Meaſures as ſhall much ſhorten your Journey.

Hey day! News from *M. Deſcartes*! (ſaid I) why he has been Dead this forty Years. I ſhould be ſorry, *anſwer'd he*, to have let that Word eſcape me in another's Preſence, but I let it ſlip purpoſely at preſent, to highten your Deſire of hearing from me thoſe Things which few in the World are acquainted with, which preſently will ſurprize you, and the Knowledg thereof will convey you in a trice to the end you deſire. Hear me then:

You muſt know (*continu'd he*) that *Carteſius*, like the ancient Leaders of Sects of Philoſophers, avoided the publiſhing all the Myſteries of his Philoſophy. Some he reſerv'd, which he only divulg'd to ſome particular Friends, of which I had the good Fortune to be one. All the peculiar Diſcoveries he had made, which he thought might be of Uſe, and either contribute to Morality, or ſerve to make any Progreſs in the Knowledg of Natural Beings, he hath obliged the Publick with. But Prudence adviſ'd him to ſuppreſs ſuch others, as ſome might have converted to an evil Uſe. The Immortality of the Soul is one of thoſe Points, wherein he was oblig'd to obſerve that Method, and certainly is one of the moſt Important Articles in Philoſophy. To prove this in a plain, familiar and intelligible way, ſuch as ſhall force the Mind to give aſſent, and leave not the leaſt Scruple be-

hind

hind, is to undermine the chief Foundation of Libertiniſm and Atheiſm. This *M. Deſcartes* hath done, by demonſtrating the diſtinction of the Soul and Body in a Man, by the only clear and diſtinct Conception that we have of thoſe two kinds of Being. That Demonſtration is one of the moſt fine and uſeful places of his admirable Meditations. And he was high-ſurpriz'd to ſee it ſo hotly oppos'd, eſpecially by *Gaſſendus*; which, though before he had ask'd his Permiſſion, gall'd and vex'd him, a little more perhaps than was convenient upon that occaſion. Which gave riſe to a Reflection in the Mouths of many at that time, and which betwixt our ſelves was true enough, *That* M. Deſcartes *did not underſtand Raillery.* But he had Moderation enough in the heat of his Conflict, to decline the ſubmitting to the Temptation, which had often invited him to confirm his Demonſtration by Experiment, fearing it might prove of dangerous Conſequence: And that is the Myſtery which I am about to teach you.

It was his way (as all know) to endeavour to make good by Experience, the Truths he had diſcover'd by the meer Light of his Underſtanding. He was in hopes, that having demonſtrated with ſo clear conviction the diſtinction of the Soul and Body, he might make ſo far a Progreſs as to penetrate into the Secret of their Union, and at laſt come to that of ſeparating, and re-uniting them when he pleas'd. The Queſtions that his Illuſtrious Scholar, *Elizabeth the Princeſs* Palatine, us'd to make upon that Head, and the difficulty he found in himſelf to invent ſuch Solutions as might be eaſily underſtood, put him, in ſhort, upon the Undertaking.

One

One day he propos'd his Design to me, and some other of his Friends. We thought him Whimsical: And I remember I laughing made Reply, That there was but one way imaginable to effect it, which was, to find out the famous *Caducæus of Mercury*, which that God, they say, sometimes by *Jupiter*'s Orders made use of, to separate the Souls from Bodies, and after a certain term of Years to joyn them unto new ones, according to the Principles of *Pythagoras*'s *Transmigration*.

That however did not divert *Carteſius* from raving on his Project, not ascertaining himself of the Success, nor judging yet he ought altogether to despair. That was it, that ingag'd him in a more exact Study than formerly of an Human Body, and occasion'd him to make those most exquisite Discoveries in Anatomy. The first Conclusion that he drew from the Idea he had of the Soul, as of a being perfectly Indivisible, was, That it was not extended through the whole Body, as vulgarly it is taught. He shew'd the falsity of that Master Reason, which was us'd till then to confirm Men in their Prejudices, that in whatever part you prick the Body the Soul is sensible of Pain. Then said the Philosophers, It must be extended through the whole. He exposed the Weakness of that Argument by two Experiments, that manifestly prove the perception of Pain, and the Impression of Objects in Places where our Soul is not. The first is that of those Persons who have lost an Arm, who from Time to Time perceive an Aking in the Place where their Fingers used to be, as if they had their Arm entire, although their Fingers are not there, nor by Consequence their

their Soul. The ſecond is of a Man that's Blind, which he often inſtances, who makes his Staff ſupply the Loſs of his Eyes, to diſtinguiſh the Figure and Qualities of Objects: Who knows by the Aſſiſtance of his Stick, whether it be Water, Earth or Graſs that he touches; whether the Floor be Rough or Smooth, *&c.* For it is certain he perceives all this by his Staff, although no one will ſay, That his Soul is in it. He then demonſtrated, That the Impreſſion of Objects upon our Body conſiſted only in the Vibration of the Nerves and Fibres, that are ſpread throughout the Parts, it being unneceſſary the Soul ſhould be co-extended with them. But it was ſuffcient to her for the perception of Objects, that that Vibration ſhould be communicated to ſome principal part where ſhe kept her Reſidence; juſt as the Vibration caus'd by the touch of a ſoft, or hard, of a rough or ſmooth Body, communicates it ſelf to the Hand by the Mediation of the Staff; that as the Staff extended from the Hand to the Body, which it touches, is inſtrumental to the Soul for the perception of the Qualities of the Body; ſo likewiſe the Nerves drawn out, for inſtance, from the Brain to the Hand, may be miniſterial to its perception of the Body that the Hand doth touch. And that in fine, The Pain, caus'd by the too near approach of a Finger to the Fire, doth no more ſuppoſe the Souls actual Preſence in that part of the Body, than does the ail of a Finger, of which a certain Maid complain'd from day to day, whoſe Arm, being gangreen'd, was cut off without her Knowledg. For ſhe only felt the Pain, becauſe the Humours, or ſome other Cauſe, made a Concuſſion in the Nerves *Let. de Deſc.*

Nerves of her Arm, which ran before to the end of her Hand, and becauſe they ſtrook them in a manner like to that which was formerly requiſite to excite a Pain in the Finger, before ſhe loſt her Arm.

Having made this firſt Step, and drawn a Conſequence of that Importance and Satisfaction, from ſo abſtracted a Principle as the Indiviſibility of the Soul; it was eaſy for him to prove, ſhe kept her Court no where but in the Brain. There it is that the Nerves do center, or rather from thence they have their Origin. It is there that the Philoſophers, if you except a few, and in thoſe *Vanhelmont*, who ſeiz'd with a Whim, plac'd the Soul in the Breaſt; it is there, I ſay, that the Philoſophers generally agree to be found that which we call the Common Senſe, that is to ſay, the only place where the Soul can be adviſ'd of all the different Impreſſions that external Objects make upon the Senſes. But ſince the Brain is of large Extent, and beſides that ſoft and whitiſh Subſtance, which commonly goes by that Name, hath Membranes, Glands, Ventricles or Cavities, it was ſomething intricate to reſolve, and preciſely to determine in what place the Soul was ſeated. *M. Deſcartes* throughly examin'd the different Opinions of Philoſophers and Phyſicians thereupon, and after having ſolidly confuted the greateſt part of their Sentiments, that were founded upon but weak and unſound Principles, he evidently concludes, The ſeat of the Soul muſt have three Conditions: Firſt, it muſt be one; to the end that the Action of the ſame Object that at the ſame time ſtrikes two Organs of the ſame Senſe, ſhould make no more than one Im-

Impreſſion on the Soul, as to inſtance, ſhe might not ſee two Men where there was but one. Secondly, it muſt be very near the Source of the Animal Spirits; that by their means ſhe might eaſily move the Members. And in the third Place, it muſt be Moveable; that the Soul cauſing it to move immediately, might be able to determine the Animal Spirits to glide towards ſome certain Muſcles rather than others. Conditions no where to be met with but in a little Gland call'd *Pineale* or *Conarium*, ſituated betwixt all the Concavities of the Brain, ſupported and incompaſs'd with Arteries, which made up the *Lacis Choroides*. It is that *Lacis* we may be aſſur'd that is the ſource of the Spirits, which, aſcending from the Heart along the Carotides, receive the form of an Animal Spirit in that Gland, diſengaging themſelves there from the more groſs parts of the Blood; and from thence they take their Courſe towards the different Muſcles of our Body, partly dependently, partly independently on the Soul; as the Author of Nature has order'd it, with reference to the end he propos'd to himſelf in the production of Mankind. *Tom. 2. Let. 36.*

So far *M. Deſcartes* took Reaſon along with him for his Guide; and for ought I know he might have ſtop'd there, had not Fortune, or rather the good Providence of God (who often encourages the laudable Curioſity of thoſe that apply themſelves to the conſideration of his wonderful Works) reveal'd to him in an extraordinary manner the Secret that he was in ſearch of. And that was without doubt one of the moſt ſtrange Effects of the deſires of a Philoſophical Soul, which a *famous Author* ſtiles a Natural *P. Malle. branche.*

tural Prayer, that never fails to be heard, when it is joyned with a prudent and exact Management of our Reason.

Should you believe me, *added he*, if I should tell you *M. Deſcartes* had often Fits of Extaſy? Why not? *Said I*; that's no ſuch incredible thing, of ſo Contemplative a Man as he was; nor is it a Caſe without a Preſident. Who has not heard of thoſe of the famous *Archimedes*, in which he often loſt himſelf, through his vehement Application to Mathematical Speculations, and in one of them his Life? *Syracuſe* being taken by the *Roman* Army, whilſt he was drawing Figures in his Chamber with that earneſtneſs of Mind; the Tumult of a Town taken by Storm, was not loud enough to wake him: And he ſooner was run through by the Soldiers that had forc'd his Houſe, than he was apprehenſive of their Approach.

Alas! *reply'd he*, with a Sigh, you'll ſee in the Conſequence of what I am relating, That the Extaſies of *M. Deſcartes* were no leſs fatal, tho' they were not of the ſame Nature, and proceeded from a far different Cauſe. It happen'd one Day, whilſt we were at *Egmond*, a little Town in *Holland*, which he delighted in, that he entred his Stove very early in the Morning (which he had caus'd to be built like that in *Germany*, where he began his Philoſophy) and ſet himſelf to thinking, as he us'd to do. Two Hours after, I came in: I found him leaning over the Table, his Head hanging forward, ſupported with his left Hand, in which he held a little Snuſh Box, having his Finger near his Noſe, as if he was taking Snuſh. As for the reſt he was Immoveable, and held his Eyes open:

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The noiſe that I made in entring the Room not cauſing him to ſtir, I had the Patience to obſerve him half an Hour poſtur'd in that manner, without his perceiving of me. In the mean while there happen'd an Adventure that much ſurpriz'd me: There ſtood upon the Corniſh of the Wainſcot in the Stove, a Bottle of the Queen of *Hungary*'s Water; I was amaz'd to ſee it deſcend, whilſt no Body came near it, and to paſs through the Air towards *M. Deſcartes*. The Cork, with which it was ſtopt, came out of its own Accord, and the Bottle faſtning it ſelf to his Noſe, hung there for ſome time. I proteſt I durſt have ſwore at that moment, there had been no ſmall Conjuring in the Buſineſs of our Philoſopher and that ſome familiar *Demon*, like that of *Socrates*, had inſpir'd him with all the fine Things he ſtill had taught us. But I was convinc'd not long after that there was nothing leſs in it, and I deſire you to ſuſpend your Judgment thereon. He awaken'd a little while after as in a ſtart, and ſtriking his Hand upon the Table, *This time at laſt*, ſaid he, *I have it*. I thought him ſtill in a Dream: And ſpringing up forthwith upon his Chair, tranſported with Joy, without ſeeing me, he cut two Capers in the middle of the Room, ſtill repeating, *I have it, I have it*. I burſt out with Laughter to ſee that Frolick, a thing not cuſtomary with *M. Deſcartes*, being naturally of a Grave and Melancholy Temper; who hearing and ſeeing me at the ſame time, preſently redden'd, and afterwards fell a Laughing as well as I. And as I was urgent with him to give me the Reaſon of his Joy and Rapture: To puniſh you, ſays he, for having obſerved an *Indecorum* unbecoming a Philoſopher,

ſopher, you ſhall not know't ſo ſoon: And with that he left the Room in which we were, and entred into his Cloſet, bolting it upon him. Nevertheleſs two days after he imparted to me the Myſtery.

We took a turn together out of Town, and after occaſional Diſcourſe of ſeveral Things; Well, ſaid he, abruptly, without recourſe to *Mercury*'s *Caduceus*, I have found out the Secret, not only of the Union of the Soul and Body, but alſo how to ſeparate them when I pleaſe: I have experienc'd it already. That was the Product of the Meditation, wherein you ſurpriz'd me the other day; and when I ſeem'd to you to awake of a ſuddain, I came farther a Field than you imagine: He ſpoke this in ſo ſerious and poſitive a way, that he ſeem'd to be in earneſt. It ſhall be your Fault, *added he*, if you are not convinc'd of the Truth of what I ſay, and of the Experiment. It is the moſt curious Secret in the World. I am reſolv'd to commit it but to very few; but that Adherency which you have manifeſted until this time unto me, will not ſuffer me to be reſerv'd in any thing. He went on, without giving me time to complement his Generoſity, and related that extraordinary Event in all its Circumſtances.

He told me, that being fix'd attentively upon the Queſtion which the *Princeſs Elizabeth* had propos'd, touching the Union of the Soul and Body, and revolving in his Mind his former Thoughts upon that Subject, in the midſt of that extraordinary Application, he found himſelf in ſuch a ſtrange Surprizal in an Inſtant, that he was not capable, when he told me of it, to expreſs himſelf clearly thereupon, nor could

he

he gain so distinct a Conception of it as when actually he was in it. All that he could tell me, was, That it resembled a Trance, because in that there is no use of the Senses; one can neither See, nor Hear, nor Feel the Impression of External Objects (unless they be extreamly violent) and then there is an end of it: But herein it was quite different; since the Soul had Perceptions of it Self, and was apprehensive of the Cessation of its Organical Functions: Which in a Trance is nothing so. That she was furnish'd with a World of Immaterial or purely Spiritual Notices, of which he had sometime discours'd to us, but in an abundantly more perfect and lively manner, than when his Attention was disturb'd with the appearances of Fancy, which constantly interrupt it: That more Discoveries of Truth could be made thus in one Minute, than in ten years by the ordinary means; which Knowledg of Truth fill'd the Soul with so pure and satisfactory a Joy, that nothing is more true than what *Aristotle* says, likely upon the same Experience, That the compleat Happiness of Man, in this Life, if there is any such thing, consists in the Contemplation of God and Natural Beings.

But he told me, he had no sense of that perfect Joy, till he was fully enlightned upon the Point that then took up his Thoughts: Which was done in a Moment. He had the satisfaction not only to know, but to be sensible, in some measure, of the Truth of the greatest part of those Things which had imploy'd his Meditations until that time; and of the Evidence of the Idea's he had fram'd concerning the Essence of the Body and Soul; to see her advanc'd upon her Pineal

Gland he had conjectur'd, and to see that the Union of the Soul with the Body was nothing less, then that vertual, or rather imaginary Extension, by which she was suppos'd commensurate with the Limbs; much less those imaginary Modes, which the Schools makes use of, to confound and plague the Conceptions of Youth. But that which was of most Importance was, to see; that this Union was nothing in Effect, but these actual Commerce and Correspondence the Soul and Body had with one another. A Commerce that chiefly is maintain'd in this, that the Nerves spread through the Body, by their Vibration give occasion to the Soul of knowing the different impressions, External Objects make upon the Senses; and in that the Soul pursuant thereupon, by the Motion she immediately impresses upon the Pineal Gland where all the Nerves concentre, determines the Animal Spirits to their several marches through the Muscles, to produce in the Body such several Motions as she shall please to give, and especially those that are necessary to her Preservation.

After that (*pursu'd, my old Friend*) *M. Descartes* entertain'd me with all that happen'd upon that occasion, and all the other Reflections he had made. The Principal of which was, That his Soul in that juncture no longer perceiving the Motions, external Objects caus'd upon his Body, and by consequence that Commerce, in which the Essence of Union consisted, being broken, she could behold her self as in a separate State, though in the mean time she resided at her usual Abode; that local Presence having the least share in her Union with the Body: She then had a mind to disengage her self from the Body,

Body, and see what would be the Event of that Separation. No sooner had she wisht it, than it was so. And he farther experienc'd what he had often suggested to us before, that if the Machine of the Body had all its Organs sound and free; if it had its customary Heat in the Heart and Stomack, the circulation of the Blood, the filtration of the Humours, and all those natural Functions, all the Motions constantly perform'd in us without the notice of the Soul, would go on as regularly in her absence, as when she was there. Moreover it fell out as she was busy in contemplating the operation of her Body at some paces distance from it, a Fly fortun'd to tickle it in the Face; presently the Hand rais'd it self to the place, and unseated the Fly just as if the Soul had been actually in the Body. So true it is that the greatest part of the Motions of our Body, which we attribute to the Soul, are owing to the sole Disposition of the *Machine*.

This Soul before she durst venture to wander very far from the Body, made her *entry* and *exit* sundry times; and judging by the disposition in which she saw it, she might without any apparent danger leave it for some time, she hazarded the undertaking a very long Voyage. She arriv'd at *Britany* in the Houses of her Relations, and from thence she made a Sally unto *Paris* to the House of some other Acquaintance. She was much concern'd to see that the People there had but an indifferent Opinion of her Religion; the Country *M. Descartes* had chose to live in, and some unwaranted Inferences that one or other had drawn from his Principles, had given occasion to those rash Censures. It is notwithstanding true, that all the time he liv'd and

when he dy'd, he was a ſound and honeſt Catholick.

Finally, ſuch was the ſucceſs the Soul found in her Rambles when ſeparate from the Body, that ſhe could when ſhe pleas'd in a Minute travel three or four thouſand Leagues: In ſo much that this of *M. Deſcartes* parting from *Egmond* about half an hour after eight in the Morning, had travers'd all *France* in an hour and an half, and was return'd at ten.

Bleſs me! ſaid I to my old Gentleman, how expedient would that be for a Perſon that ſo paſſionately deſires to ſee the Country as I do! You ſhall gratify your Curioſity, *anſwer'd he*; but hear me out.

M. Deſcartes Soul being return'd from her Voyage in *France*, found her Body almoſt in the ſame poſture in which ſhe left it. But as yet ſhe was not fully Satisfy'd. She was unacquainted with the way and means that led her into this Condition: And ſhe conſider'd it was an hazardous Exploit, and that being once united to her Body, ſhe might never, for ought ſhe knew, be disjoyn'd again, till Death ſhould cauſe a final Separation. She apply'd her ſelf therefore ſeriouſly to conſider the Nature of her Body, and the diſpoſition of all its Organs: She found that the Nerves imploy'd in Sentation, and thoſe that ſerve for Natural functions, as the beating of the Heart, the circulation of the Blood, *&c.* were of a Nature quite diſtinct. She ſaw that theſe were vehemently diſtended, and ſhe concluded it might be for the better communicating the Animal Spirits to the Muſcles with which the Nerves are united, and capacitating them to maintain and continue thoſe natural Motions, the Soul is not aware of when

when united with the Body; and that, on the contrary, the Nerves made uſe of in Senſation, and by whoſe Means the Soul received the Impreſſion of Objects, were almoſt all unbraced, and lax, which might prevent the Motion, cauſed by the Impulſe of Objects, from being continued unto the Seat of the Soul: The Difficulty was to find the true Cauſe why one ſhould be taxed without the other, and how ſhe might bring it about to diſtend thoſe that formerly were laxed.

Mean while the Snuſh-Box, which I mention'd, his Body held in its left-Hand, made *M. Deſcartes* call to mind, That before his Extaſie he had taken Tabaccco-Snuſh, and he could not tell but ſo extraordinary an Effect might have been produced by the Vertue of that Tobacco. That which he took of was an unuſual kind, which a Merchant of *Amſterdam* had brought over from an *Iſland* near *China*, and preſented him: It was extreamly ſtrong, and *M. Deſcartes*, to mollifie it had mix'd a certain Herb in it, dryed to Powder, whoſe Name he never would acquaint me with, nor the Place where it grew, though he preſented me with a great Quantity of the ſame: He laid a ſufficient Doſe upon the Back-Side of his Hand, and gave it his Body to take; and at the ſame Time happen'd this prodigious Effect in his Brain; for all the Vapours raiſed there ſince his laſt taking were diſlodged and diſſipated in an inſtant. He obſerved it was only the Particles of the Tobacco that ſcattered the Fumes of the Brain, and that thoſe of the Herb which he had tempered with it being not ſo fine, and having very little Motion, faſtned themſelves in the Nerves that cauſe Senſa-

tion, and and made them looſer than they were before.

Seeing that Effect, he no longer doubted, but concluded it to be the Herb, which he mix'd with the Tobacco, that caus'd his Trance, and took away his Senſes; and that the Tobacco, at the ſame Time unharbouring all the Fumes that might benight the Brain, left the Soul with the entire Liberty of knowing and reflecting on it's ſelf, as ſhe had then experienc'd. After which he thought that *Hungary Water* was ſufficient to brace the Nerves afreſh, that ſerve for Senſation, ſince it is often uſed to recal thoſe Perſons that ſwoon away. The Soul takes the Bottle, I not long ſince mentioned, and brings it in the Air from the far Side of the Chamber to his Body, (and therein conſiſts exactly the Magick of which I then ſuſpected *M. Deſcartes* guilty) and moiſtens his Noſtrils with it: The ſubtile Vapour of that Liquor effected what he aimed at; preſently the laxed Nerves erect themſelves, and the Soul ſtreight ſeats it ſelf in the Pineal Gland, and finds itſelf confederate with the Body as before. It was in that inſtant I perceived *Deſcartes* to come to himſelf. I told you, he lock'd himſelf forthwith in another Room, it was to make a ſecond Experiment of his Tobacco and his Herb, which ſucceeded to his Hearts Deſire: Since when, it was a Buſineſs of nothing for his Soul to leave the Body; and ſince his imparting to me the Secret, his Soul and mine have made an hundred Expeditions together, to inſtruct our ſelves of the greateſt Curioſities in Nature.

As those that read the Works of *M. Descartes* are unacquainted with all that I have been relating, they with just Cause are amazed at a thing, which you will not startle at for the future. I mean the Particulars he descends to in his *Physicks*, concerning the Properties of his three Elements, at how great soever remove from Sense they lie; concerning their Figure, their Motion, their Rank and File in the Composition of his World, and all particular Bodies, concerning the Disposition of his *Vortexes*, in which he proceeds so far as to observe the different size of the Balls of the second Element, of which they consist, in their respective Places, how those that come nearest the Centre of the *Water* are the least of all; those that are a little removed are somewhat bigger, increasing still in Bigness unto a determinate Distance, after which they all are equal. Concerning the Formation of their Parts chamfer'd in Fashion of a Skrew, with which he explains the Nature and the different *Phenomena's* of the Load-Stone, in a way so fine and easie, *Phænomena's* that till then had puzled and confounded all the Philosophers, even those that had so ready a Method of explaining all things by the Assistance of their occult Qualities: All this he saw intuitively, and of himself.; and for me that speak to you, is it possible to think, That at the Age of seventy seven, and being of so weak a Constitution as I am; I say, is it possible for you to think I should have lived to this, and preserved my Health and Vigour as I do, unless I had had a perfect Knowledge of the Machine of my Body? Unless I had still filled and made up the Breaches whereat Life leaks and runs out continually? I mean not, in applying the Re-

Part. 3. *Princip.*

medies that Medicine preſcribes, whoſe conjectures are ſo very uncertain, and from the Uſe of which *Monſieur Deſcartes* has ſo frequently diſſuaded the Princeſs *Elizabeth*: But in the Practice of that Critical Knowledge my Soul has of my Body, of which ſhe perfectly is, and can be inſtructed as often as ſhe pleaſes, by putting herſelf in the Capacity I have now been ſpeaking of. I muſt acknowledg Sir, *replyed I*, then, it is a moſt admirable Secret and of Infinite Uſe; I am impatient till I learn it of you, and as ſoon as I know it I am perſuaded I ſhall improve it to as great a Benefit as *Adam* would have done the *Tree of Life in* Paradiſe, if he had continued there. And I doubt not but if *Origen* had known it, he that looks upon the Hiſtory of Scripture as *Allegory*, he would have believed the Tree of Life to be nothing but this Myſtery which God had communicated unto *Adam*: But that which you was ſpeaking of your Health, creates one Scruple in me; How *Monſieur Deſcartes* having the Advantage of this fine Knowledg came to dye at the Age of fifty four? Was he ſo much out of Love with his Life as to neglect the repairing thoſe effluxes of his Machine, whoſe Failures and Diſaſters he could ſo eaſily foreſee?

Lett. de Deſcartes.

Do you believe then, *returned he*, that *M. Deſcartes* is dead? I know not, ſaid I, how you underſtand it, but methinks the Corps of a Man ſhould not be buried unleſs he was dead before; and all the World knows that in the Year 1650. the Body of *M. Deſcartes* was interred at *Stockholm* with great Pomp and Solemnity, by the Care of *M. Chanut*, his particular Friend, and then Embaſſador of *France* at the Court of *Sweden*: That ſince

M. Cherſilier pref. de Lett. de M. Deſcartes.

ſince *M. Dalibert* hath ordered his Bones to be removed to *Paris*, and to be diſpoſed of in the Church of S. *Geneve*, where his Epitaph is to be ſeen, engraven upon a fair White Marble: It ſeems to me once more, That all this ſuppoſes a Man as dead as dead can be.

All theſe Particulars are true, ſaid my *Carteſian*; but for all that it is falſe that *M. Deſcartes* is dead; for that we call Death is when our Body becoming incapable of Vital Functions, either by the Defailure of the Organs, which are wore out in the Succeſſion of Years, or corrupted by ſome Diſeaſe, or endammaged by ſome Hurt or Wound, the Soul is oblig'd to quit her Habitation, following the Laws of their Union eſtabliſh'd by the Sovereign Maſter of the Univerſe: But *Carteſius*'s Soul was by no means ſeparated from his Body after this manner. Hear then the Matter of Fact.

About three or four Months after his Arrival in *Swedeland*, where Queen *Chriſtina* had invited him, and did him the Honour to entertain him in her Library an Hour in a Morning every Day: He was ſeized in the midſt of Winter with an Inflammation of the Lungs, ſeconded with a Giddineſs in the Brain; but the Fever having left his Brain, there had been no great Difficulty in his Recovery. Himſelf had wrote a little Time before to one of his Friends, That he had made ſome Diſcoveries in Anatomy, that inſur'd his Life for an hundred Years: And 'tis known that *M. Deſcartes* did not uſe to go by Gueſſing, or advance any thing without a firm Aſſurance; but an unſeaſonable Misfortune rendred his Prediction fruitleſs; ſeeing he had not reſted well that Night, his Soul had a Mind to take a little

Pref. de lett. de Deſcartes.

Lett. de Deſcartes.

Turn

Turn for Recreation-ſake; he takes his uſual Doſe of Snuff, and his Soul leaves his Body in the Bed. By ill Luck the Phyſician, contrary to his Cuſtom came to viſit him at Midnight; the Noiſe he made, in entring the Chamber, did not awake his Body, whoſe Senſes were perfectly laid aſleep by vertue of the Herb, of which I ſpoke, that was mingled with the Tobacco: But having put to his Noſe a Vial of extreamly Spirituous Liquor, to fortifie the Brain, it made a more quick and lively Sally upon the Organ of Senſe than *Hungary Water* uſed to do, which *M. Deſcartes* Soul made uſe of when ſhe would re-enter the Body, and conclude its Trance; it cauſed it to open its Eyes, and to give ſome Groans. The Phyſician ask'd it how he did? The Machine accuſtomed, ſome Days ago to anſwer to that Queſtion, *That he was very ill*, made ſtill the ſame reply; but to other Queſtions the Phyſician propoſed (ſince the Soul was not there to talk rationally, and anſwer to the purpoſe) the Anſwers were full of Extravagance and *Delirium*, juſt as the Machine was determined by the Voice of the Doctor: It talked eternally of the Separation of its Soul from its Body, becauſe the laſt Thoughts the Soul entertained in the Act of ſeparating herſelf were thoſe of that Separation, which had left ſome Figures or Traces ſtamp'd upon the Brain, anſwering to thoſe Thoughts, and determining the Tongue to a Motion, requiſite to pronounce ſuch ſort of Words. Theſe Symptoms enduc'd the Doctor to believe he was again tranſported with a Raving in his Head; wherefore he is out of Hand blooded in the Foot, Cupping-Glaſſes are apply'd, and ſeveral other Violent Remedies,

which

which so exhausted and altered his poor Body, that in a short Time it had spent all its Strength; it's natural Heat began to faint, and lose itself by little and little; a Defluction of his Brain fell into his Breast; and in a Word, it became a meer *Cadaver*, and unable to perform the Duties of Life, and to receive his Soul. Thus it happened; so that you see a Man may truly say, *M. Descartes* is not dead.

Assuredly Sir (*said I*) this is not to dye according to *due Form and Method*; nevertheless the *Swedish Physician* would be held Guiltless before all the Faculties of *Europe*; for he has followed the Rules of his Art he acted according to appearance, and if he did but understand what you are teaching me, That *M. Descartes* is not dead, he might boast of the Greatest and most unprecedented Exploit that was ever known in Medicine, I mean to have killed a Man without causing him to die. But Sir, I beseech you (*continued I*) acquaint me, if you know, What was the Destiny of *M. Descartes* Soul; for, according to the uncontroverted Principles of our Faith, a Soul in leaving this World receives her Arrest for Eternity, and either has her Portion in Paradice, Hell or Purgatory for some Time.

That Question ruffled my old Gentleman; And in the Name of God (*said he*) almost in a Passion, rid your self of that Ridiculous Custom you have taken up in the Schools, of introducing Questions of Religion in Matters purely Philosophical. *M. Descartes* had once thought to renounce his Philosophy, or at least refuse to publish his Works, to save him the Trouble of answering those impertinent Objections

ctions, which were made at every turn and upon all occaſions. I am giving you clear Matter of Fact, and you deſire me to Account for the Conduct of God. But in brief, have not I foreſtall'd all your Difficulties, when I told you *M. Deſcartes* was not Dead? And ſince he is not Dead, why demand you if he has ſubmitted to a Judgment, the Dead are only concern'd in?

I beg'd his Pardon for my Imprudence; and agreed with him, That nothing was more unſeaſonable and inconvenient, than ſuch ſort of occaſional Queſtions, to a *Philoſopher* that had made a *Syſtem* without regard to any thing of that Nature. And that likewiſe put me in mind of entreating my Readers, to uſe the ſame Candor towards me. That they will not wrangle with me, upon the Point of ſeparate Souls, whole Shoals of which I meet with in my Voyage to the *World of Deſcartes*, nor tye me to anſwer all the Scruples, they might be able to raiſe on that Account. For therein bottom the moſt agreeable Paſſages of my Hiſtory, with which I ſhould not preſent the *Publick*, but upon that Condition. I would entreat them to remember the Priviledg theſe *Carteſian Gentlemen* take, who when perplex'd in anſwering the Argument, brought againſt the Eſſence of Matter, and drawn from the Sacrament of the Hoſt, think they have right to cry out, They are injur'd; That their Philoſophy is ſequeſtred from Things relating to Faith; That they are *Philoſophers* and not *Divines*, and undertake the explaining the Myſteries of Nature, not of Religion: I would, I ſay, they'd do me the like Juſtice; or, if they had rather, the ſame Favour. And

ſup-

ſuppoſing any one ſo Religious, as to ſuſpect me of the Hereſie of thoſe, who ſay, The Souls in parting from the Body are not doom'd for Eternity; I wiſh he'd conſider once more, that I am in this, an *Hiſtorian* and *Philoſopher*, not a *Theologiſt*, and give a Relation of *Deſcartes*'s *World*, am not making a Profeſſion of Faith. Which the Character of an Hiſtory (ſuch as I am upon) will bear, far more independently of the Truths of our Religion, than a Syſtem of Philoſophy. Any one that knows never ſo little muſt be forc'd to acknowledg this: Which being once ſuppos'd, I return to the Narrative of my *Old Gentleman*, who thus went on.

M. Deſcartes's Soul returning to *Stockholm*, found her ſelf in the like unlucky Circumſtances, as did one *Hermotimus*, mentioned by *Tertullian*, who having procur'd the ſelf-ſame Secret as *Deſcartes*, left conſtantly a nights, his Body aſleep in Bed, whilſt his Soul went a rambling through the World. Both one and the other, at their return, found their Lodgings out of a Capacity to receive them. *L. de Anima.*

The Task *Deſcartes*'s Soul enjoyn'd her ſelf then, was, to meet at *Paris*. She would not tell me preſently of the Accident, but only invited me to take a turn or two: No ſooner ſaid than done. With one Snuff of the Tobacco, I equipt my ſelf to wait on her. My Soul was no ſooner out of my Body, but ſhe ſaid, in Language Spiritual, ſhe was about to tell me ſtrange News. I am, ſays ſhe, no longer Imbody'd; my Corps is this day to be interr'd at *Stockholm*; and he gave me the Particulars of what I have been relating: Nor did ſhe ſeem ſub or afflicted thereupon. I then demanded of her

her if she experienc'd what the *Philosophers* report, That the Soul being the substantial Form of the Body, when separated for good and all, is *in statu violento*. She answer'd me, she knew nothing of that violent State, but found her self incomparably better out, than in the Body: And that she had but one Concern upon her, to know in what part of the vast Space was best to settle her Abode in. That she would take my Directions in the thing, but that she found her Will inclin'd for the *third Heaven*. *The third Heaven*, according to the division *Carteſius* makes of the World, is the last of all, and that which is the farthest remov'd from us. For the *first* is nothing but the *Vortex*, in which is plac'd the Earth, whose Centre is the Body of the Sun, about which, the Cœlestial Matter that composes the *Vortex*, carries us, and makes us turn continually like the other Planets. The *second* Heaven is incomparably larger than that in which we are, and takes up all that mighty space in which we see the fix'd Stars, which are so many Suns, and have each of them a *Vortex*, of which they are themselves the Centre, as our Sun is of this. Lastly, the *third* Heaven is all that Matter, or all that indefinite Extent, which we conceive above the Starry Heaven, and is void of Bounds, and in respect of which the space of all the other may be consider'd as a Point.

Now many Reasons determin'd *M. Descartes* to choose his place of Residence in the highest Heaven. The first was, To avoid the Company of an Innumerable gang of Souls of *Philosophers*, that were vaulting and fluttering on all parts of this our *Vortex*; for, to tell you by the way,

way, 'tis incredible how many Souls we met upon our Journey: And *M. Descartes* was much surpriz'd to see the Secret, of which he took himself to be the first Inventer, made use of in all times, even by those of a very mean Quality, whereby they have escap'd a dying, or whose Souls have lost their Bodies by some Accident, not unlike that of *M. Descartes*. But that which made their Company so distrelisht, and perfectly intolerable to *Cartesius* his Spirit, was, That these Souls, so disentangled as they were from Matter, were tinctur'd still with Prejudice, wherewith they were prepossess'd, when united with their Bodies. That when he would have conversis'd with them about the Principles of Bodies, and the Causes of several Phœnomena's, they faintly suppos'd to him, or prov'd by the Authority of *Aristotle*, *substantial Forms*, *absolute Accidents*, and *occult Qualities*, as is done to this day in many Schools. And except some few Souls of the highest Rank, which he hath converted and proselyted to *Cartesianism*, all are inveterate and inleagu'd against him with as immoderate Fury, as the Philosophers of this World when he began to publish his Doctrin here.

The second Reason that byass'd him to that Election, was, because he look'd upon those indefinite Spaces as a new Discovery, of which he was the Author. For it was upon his forming a distinct Idea of Matter, whose Essence consisted in Extension, that he concluded Space, Extension and Matter, to be one and the same thing, signify'd under different Names: And being it was necessary to admit of a Space and an Extension above our World, since we have a most clear Conception of them, it was plain, That

above

above our World there was Matter too, and as we can have no Idea of any Bounds or Limits that Matter has, it is neceſſary it ſhould be Infinite or rather Indefinite.

Finally, the third and moſt prevailing Reaſon of all, and which he intimated not to me, until we arrived upon the place, is, that well, conjecturing the Matter above the fix'd Stars to be uninform'd, and not yet ſhap'd into a World, he was in good hopes that he was able to ſet it to work himſelf, and fancy'd that in dividing and agitating it, according to his *Principles*, he could reduce it to a World like this, excepting that it would be deſtitute of real Men, and only ſtor'd with *Automatous Machines* in their Likeneſs. That Project was the Subject of the moſt part of his Books, eſpecially of his *Book of Principles*, and that Entituled, *The World of* M. Deſcartes. We ſet out immediately for the third Heaven. I ſhall not deſcend to the Particulars of our Voyage. I hope in a few days you'll bear me Company there your ſelf. I'll only ſay, that upon our Coaſting, we found all Things exactly in that Portrait we had drawn before, without Form, without due Order, or any regular poſture of the Parts, as rude and unſightly Materials, that require the Hand of the Artiſt. We ſurvey'd it all about, and bewilder'd our ſelves a long time in the vaſt Deſerts of the other World; which perfectly repreſented to me the Face of the *Chaos*, and that confus'd Maſs of which the Poets ſpeak. That enterview, as much a Spirit as I was, fill'd me full of Horror, ſo hideouſly frightful it appear'd. It is notwithſtanding here (*ſaid the Spirit of* M. Deſcartes) that I will fix; nor will

I quit

I quit this Place till the Providence of God ſhall diſpoſe of me for Eternity; he brought me into the World to reform and re-eſtabliſh the *Philoſophy* of it. I had with good Succeſs began the Buſineſs I was ſent upon; but one unlucky Accident, not in my Power to foreſee, prevented me from proſecuting my Deſign: That ſhall not hinder me from uſing the Knowledg he hath given me to the beſt Advantage. I preſume, to accompliſh here the *Syſtem of my World*, of which you have ſeen the Draught: Matter here is plenty and to ſpare, and only Motion's wanting; and I have all encouragement to hope, That God, who, of his Goodneſs, uſes to condeſcend, in Quality of an Univerſal Cauſe, to the Thoughts and Inclinations of his Creatures, conformably to their Nature, will not be wanting to me. Being a ſeparate Spirit, I can lay Claim to greater Motions far than thoſe that ſet the Wheels of all the World below a going: I ſhall no ſooner deſire the Moving of this Matter, but God, purſuant to the Laws of his Providence will create ſo much Motion as I have a Mind to: There will be need of nothing more than the Determination of that Motion, and the Diſtribution of it, according to the particular Neceſſities of every part of Matter. That determination, as I have heretofore explained, depends on Second Cauſes, which Province will entirely belong to me; I know very well the Rules; the Conſequences I have drawn from thoſe Rules will infallibly compaſs my Deſign. In ſhort, I find my ſelf in a Capacity, according to my *Principles* to warrant the Succeſs of my Enterpriſe; ſince notwithſtanding the Machine I undertake is of an unweildy Bigneſs, for I

deſign to make it as capacious as *our World*, and muſt be compoſed of an infinite different Parts, ſince the Engines that muſt be plaid are innumerable, ſince the *Combinations* and the different *Determinations* of Motions muſt be infinite, it will not be the Work of one Day, nor one Year; half an Age is not too much for an Human Spirit for projecting ſuch a Grand Deſign: But I am perſuaded, my Principles ſuppoſed, it will be ſufficient. I ſhall take no Satisfaction in Viſitants, that ſhall come and interrupt me, during that Space of Time: I will now begin to enjoy the Pleaſures of Solitude, which I could never find on Earth, and I intreat you to manifeſt my Intentions thereupon to all my Friends below, whom you think it convenient to acquaint with my Circumſtances, without telling them preciſely where I am; for once more I ſay, I would not have them know exactly what's become of me, nor what I am a doing: The Men there, and eſpecially the *Philoſophers*, deſerve not to be admitted to the Knowledge of theſe great Myſteries, they'd ridicule as fabulous what ever you ſhould ſay concerning me, as they did for the moſt part entertain as Whim and *Chimera* all that I revealed of my Project touching the *Conſtruction of a World*. As for you, *my dear Friend*, I would that you return to your Body, which now you have left almoſt two Days; too long faſting may inflame it, and introduce a Fever: Above all, take Care you never finally abdicate it, upon your own Authority, which ſome of my *Diſciples* have been guilty of, and ſo many Ancient *Philoſophers* that we met in diverſe Places; for that is contrary to the Decree of Providence. Enquire in your Way for the Spirit of *Father Merſennus*,

Merſennus, and ſend him hither; I'll take him to me for an Aſſiſtant, and to keep me company.

Having receiv'd the laſt Orders of this dear Spirit, and obtain'd Permiſſion to give him a Viſit once at leaſt, in three or four Years Time; having conſidered the great Violence I ſhould ſuffer, in being ſo long diſtracted from him, and the Danger likewiſe I was in of being ſo for ever, in caſe I ſhould dye during that great Term of Years, he had deſtined to the compleating of his World; we ſpiritually imbrac'd each other, and I ſtood forwith for *Paris*. I cut it through a vaſt number of *Vortexes* and *Planets*, without diſcovering *Father Merſennus*; but at laſt I found him out in *Mercury*, in which he very much delighted, becauſe that is a very jolly Planet: I intimated to him the Orders I had for him from *M. Deſcartes*, which he imbraced with Joy, having been all-a-long his faithful Correſpondent, and eſpecially at *Paris*. Being I was in haſte for my Departure, we had not much Diſcourſe together, ſo we parted; he bent his Courſe towards the third Heaven, my Spirit took the Way that led to my own Home, where ſhe reunited with my Body.

Since that Time I have paid *M. Deſcartes* ſix or ſeven Viſits; the laſt was about two Months ago. He aſſured me then, He had diſpatched almoſt all his *Combinations*, and that all was as good as demonſtrated: And unleſs the moſt evident Principles of *Geometry*, *Mechanicks* and *Statics* were falſe, he was confident of the Performance. He promiſed to give me notice about this Time, to come and ſee him, to the end we might take a Review together, and examine his

Deſign, and may be forthwith fall to work in the *Production of his World*, that is to ſay, to afford me the moſt Noble Diverſion, of which an human Soul is capable. I daily expect a Meſſage to depart, and it will be your own Fault only (*added he*) if you are not a Sharer in this Voyage, and gain a greater Stock of Knowledg in one Day than the moſt reputed *Carteſians* have in all their Life. This is the Sum of all I had to ſay.

Scarce had he made an End of ſpeaking, but a *Country Gentleman*, of no mean Rank, of a good and genteel Preſence, though I diſliked the impertinence of his Viſit at that inſtant, entred his Chamber, in a Country Habit, ſaying, his Coach ſtood ready at the Gate, and that it was Time to go. It was a Deſign they had agreed on, to take the Air for a Fortnight; which obliged me to take my Leave of them and retire.

I knew not what to think of this Relation: I never took him for an *Enthuſiaſt*, that had given it me: And ſurely (thought I) this Story is too well purſued to be a Dream. I then conceived it might be ſome myſterious *Allegory*, containing all the Secrets of the Sect, of which he would give me afterwards the Explication. I applyed my ſelf however to the reading of my fine *Deſcartes*, and I compaſſed him during the Fortnight, though it coſt me many a Head-ake, occaſioned by the too great Intention of Thought: But I underſtood in the Conſequence, That all he had ſaid was far from *Allegory*, and that he ought to be taken in a Literal Senſe, at the end of his *Epiſtle*.

My *old Friend* being returned from the Country, ſent me a Letter, the next Morning, in which

which he notified, He would ſee me before four and twenty Hours were at an end, and that I ſhould put my ſelf in a Readineſs for my *Voyage*. I waited all the Day, with great Impatience; but ſeeing at laſt he did not come, about ten a Clock I went to Bed; half an Hour after, being yet awake, I was amazed to hear my Curtains drawn on all Sides my Bed, the Caſements of my Windows to fly open with ſo vaſt a Noiſe, and to ſee, by the Aſſiſtance of the Moon, my *old Gentleman* in the middle of the Room, and another with him, habited in an unuſual Dreſs: I proteſt I was ſeized with ſuch a ſudden Dread, that the Hair of my Head ſtood upright, and I ſweat all over. The *old Gentleman* then approaching to my Bed-ſide, ſaid, You are fearful, take Courage a little, Don't you know me? I know you (*anſwered I*) in a trembling Tone, but what could I think to ſee you in my Chamber without entring at the Door, with ſuch a Noiſe and Havock as was here? What you ſhould, and ought to think, (*ſaid he*) is, that a Spirit ſeparate from the Body, may enter any where without a Key, and needs not the Convenience of a Door: And for the Noiſe, it was firſt to wake you, and then for the Pleaſure of ſurprizing you, and putting you in a little Fright. Do not you remember the Converſation we had together a Fortnight ſince? I well remember it (*ſaid I*) but was it all true you then related? Infallibly (*ſaid he*) and I now am come to make good my Promiſe I then made you, of conducting you to *M. Deſcartes's World*: Here is the *Reverend Father Merſennus*, who is now come from him, to adviſe me all is ready; and that he would be glad, before he puts the Deſign of his *World*

in Execution, to make a Tryal in the Presence of some of his Friends; you shall be of the Party if you think fit: I advise you not to lose so fair an Opportunity. At the same Time *Father Mersennus* steps up, and bowing low to the Ground, confirmed what my old *Philosopher* had said, and added, That understanding by him the Character and Qualification of my Soul, he could undertake for a kind Reception from *M. Descartes*. Pardon *Reverend Father* (*said I*) my Astonishment, I am not accustomed to receive such Visits: Spirits I never saw before, and I could never have believed they had been so civil and well-bred as I now find them.

Mean while, though I us'd all possible endeavours to compose my self, I still was somewhat fearful: I was under strong Apprehensions there might be Sorcery and Witchcraft in the Case, and that under pretence of guiding me unto *M. Descartes*'s *World*, they design'd to convey me to the *Witches Sabbath*. On the other hand I fear'd to affront these Gentlemen-Spirits, who for the most part understand not Will and Humour. And my Memory furnish'd me with a parallel Case, of some certain People cajol'd with the pretence of such sort of Mysteries, till having learn'd a part, and refusing to go on, they had their Neck writhen by the Devil or his Accomplices: I renounc'd all manner of covenanting in my self, and made use of all the Precautions my Prudence could suggest in that Conjuncture; after which, I spoke to them as fairly as I could, in this manner.

Gentlemen, you make Profession of a *Sect* that gives it as a *Maxim*, That a Man must not assent to any thing but a Truth, fully and clearly manifest:

manifeſt: And that it is diſtinguiſhes you from all others, and eſpecially the Philoſophers of the Schools. The Converſation I had with this *Gentleman* a fortnight ago, and the Critical Reading of *M. Deſcartes* ſince, joyn'd with the preſent Circumſtances, create ſome Scruples in my Mind, of which I ſhould be glad to be clear'd before we go any farther. Will you take kindly what I ſhall propoſe? We will hear you readily (*anſwer'd they*) and you ſhall have the ſatisfaction you demand. Only ſettle and compoſe your ſelf, for you ſeem a little diſturb'd: And reſolve your ſelf you need not fear, and that you ſhall receive no harm.

Thoſe laſt Words a little reviv'd me, and I began to ſpeak with a more ſteady Voice. It is not many days ſince I read in *M. Deſcartes*, That *the Eſſence of the Soul conſiſts in being a thinking Subſtance*, and that ſhe hath neither Extenſion, nor Figure, nor Colour; which I know not how to reconcile with what I ſee at preſent: For you give me to underſtand, you be purely Spirits, yet I perceive in you different Colours, and I ſee you form'd in the Figure of a Man, and you look like Beings that are extended: Rid me I pray you of this Perplexity. *Father Merſennus* preſently took the Word. What you propoſe (*ſaid he*) ſtands to Reaſon: But it is eaſy to anſwer you, and plainly to expound the Thing by the evident Principles of true Philoſophy. It is certain a *Soul* is eſſentially a *thinking Subſtance*, and that ſhe is neither Figur'd nor Colour'd. We are purely Spirits indeed, and though we ſeem to have a Face, and Hands, and Feet; yet we have neither Face, nor Hands, nor Feet. He muſt be as addle-brain'd as was

Tertullian, and bent on Error with as great a Zeal as he, when he ingag'd himſelf in that Affair; Who thinks the Soul is not only Corporal, but has alſo Parts proportion'd to the Body, which ſhe animates, and is therein juſt as a Sword is in the Scabbord: His devout Spirit that ſaw Souls of a blew Colour in his Prayer, had topſyturn'd his Mind upon that Subject.

To make you therefore comprehend how you ſee us Colour'd, Figur'd and Extended, with Face, Hands and Feet, though we have neither Extenſion, Colour, Figure, Hands nor Feet; you muſt know, your Soul, whilſt ſhe is united with the Body, cannot behold another Soul, ſo as in her ſelf ſhe is, cannot hear her Speak; or to explain my ſelf more juſtly, cannot have the immediate Communication of her Thoughts. To the end then, you might know that we are here, and that we might make you underſtand our Thoughts, and the Deſign that brought us hither, it was expedient to make uſe of means proportion'd to the Capacity your Soul at preſent's in. Now I would not have you imagine, that for this purpoſe I was forc'd to frame my ſelf a Body of ſome Matter. But only call to mind what your reading of *M. Deſcartes* ought to teach you, That to ſee an Object, with regard unto your Soul, is nothing elſe than to perceive the Extenſion, Figures and Colours, of that Object. That that perception is not caus'd immediately by the Object, which being at a diſtance from our Body and our Soul, cannot act upon them of it ſelf: That therefore's done by the Reflection of Infinite Rays of Light, which rallying from every part, and every point

of

of the Object, ſtrike and make the ſeveral Threads to quaver, of which the Optick Nerve's compoſed. That Concuſſion is communicated to the Brain, and to the place of Reſidence of the Soul; and it is purſuant to, and on the Account of that Concuſſion, the Soul forms an Idea of the Object which ſhe perceives or apprehends in the manner we call *Seeing*. And it is according to the various Modifications of that Concuſſion, that ſhe ſees Objects at ſeveral diſtances under divers Figures, and of different Colours. From whence it follows, that the Perceptions or Ideas of the Soul, have no neceſſary dependence on the Objects; but only on the exteriour Organ, which may be prov'd by a thouſand Experiments, but eſpecially by that of Phrenetick People, who perceive Objects quite different from what they really are; and ſee them where they are not.

Now that you may perceive a Body in the place where I am, when no ſuch thing is there, it is ſufficient that your interiour Organ ſhould be moved in ſuch a manner, as it would be if a Body was really there. That's the thing I now am actually doing upon your Optick Nerve, to make you know that I am here: That is it, which cauſes you to ſee a Body, though in truth there is none to ſee. And what I act upon the Organ of Sight, to make a Body appear, the ſame I do in proportion upon that of *Hearing*, to find you Sounds and Words. I impreſs a like Motion upon the Strings of your Nerves of the fifth Conjugation, as would the Vibrations and Undulations of the Air, were it agitated by the Motion of a Tongue and the Mouth of a Man, who ſhould ſtand where I

ſeem

seem to do, and should utter the same Words you at present hear.

F. Maignan. Upon these Principles it was, that a *Father* of our Order has most ingeniously unfolded the Mysteries of the Holy Sacrament, without the assistance of that Medly of absolute Accidents, that could never be conceiv'd. For, says he, when we are taught the *Body* of *J. C.* is under the appearance of Bread, nothing more is intimated, than that the *Body* of *J. C.* is truly there, where the Bread was, and seems still to us to be, to the end that Bread may appear where the *Body* of *J. C.* actually is, God acts upon our Senses. He there produces the self-same Motions, and makes the same Impressions the Bread did before. So when our *Lord* presented himself to St. *Magdalen* in the form of a *Gardiner*, it was by acting upon her Eyes, just as the Visage and Habit of the Gardiner would have done, and not by cloathing himself with the absolute Accidents of a Gardiner.

But that which you may gather from this present Experience, is, the manner how the Dead appear, who sometimes by God's Permission present themselves to those alive: For they appear by the same Method as I do actually my self. And those Bodies of Air or Water, which some pretend they attire themselves withal, are only the Whymsies and Forgeries of their Imagination, who have treated of *Devils craft* in supposing the *Principles* of the *School Philosophy*. Have you any farther Difficulty, said he, upon that Point?

Ah! (*Father*, *reply'd I*) you have made it as clear as the Sun, and have given me infinite Satisfaction. Your Discourse is altogether Spiritual.

tual. I rely not much upon the Explication of that *Father* of your Order, upon the Myſtery of the *Euchariſt*. I take it for a Maxim with the wiſeſt of the *Catholick Philoſophers*, That all Novelty in ſuch ſort of Things is dangerous, at leaſt always ought to be ſuſpected. You have abſolutely diſpers'd the Doubts that troubled me. It was indeed long ago that I had a Notion, Senſation was caus'd by the Local Motion of the Organs; but that Idea was not unperplex'd. *Ariſtotle* had ſaid it before *Carteſius*, but had not explain'd it. From this time forth I renounce for ever a great part of the Ideas I had fram'd thereupon. I ſolemnly abjure before you, all the Axioms that reſpect the *Active, Paſſive, and paſſible Intellect*. I acknowledg they are Terms that ſignifie nothing, and are of no uſe but to make the Ignorant to ſtare, who cannot underſtand them, but imagine the *Philoſophers* can. *Ariſt. in Probl.*

After that Proteſtation *Father Merſennus*'s Soul mov'd my *Organ* in ſuch a manner, as gave me to apprehend he was well pleas'd. Which made me take the boldneſs of propoſing a ſecond Scruple. Father (ſaid I) I don't well underſtand what that *World* is of *M. Deſcartes*, where you would conduct me. For in reading *M. Deſcartes* I did conceive his World was nothing elſe, but this of ours, explain'd by the *Principles of his Philoſophy*. And I diſtinctly remember I have read in a Letter, he had formerly wrote theſe Words; That he ſhould think himſelf undeſerving of the Name of a *Natural Philoſopher*, if he could only tell how Things might be, without demonſtrating they could not be otherwiſe. There he Bravado's it a little. But that *Let. 37. Tom. 2.*

con-

confirms me, that when he ſpeaks the contrary, and ſays he pretends not to give an Account of Things as they are in the World, but only how they ought to be in a World, that he imagins he would be angry, ſhould we credit him thereupon.

What you ſay is true (*reply'd Father* Merſennus) *M. Deſcartes* deſign'd not to be believed in that Particular. So that the *World of* M. Deſcartes, is in earneſt, this World explain'd by the *Principles* of his *Philoſophy*. But it is alſo true, that there is, or rather, will be very ſpeedily, another World, that may more properly be call'd *Deſcartes*'s *World*, ſince it will be of his own Contrivance. And that's the World with which this Gentleman, your Friend, has entertain'd you, and that we ſhall give you a ſight of if you pleaſe. Nothing certainly (*ſaid I.*) will be more diverting: I would quit the Racing, or the *Feſtivals* of *Verſailles*, to be Spectator of this Prodigy, which doubtleſs, is the compleateſt Work of *Philoſophy*, and the almoſt Maſter-piece of Human Nature. But Sir (*ſaid I, turning to my old Gentleman*) the Story of *Deſcartes* you have formerly related, gives me ſome diſturbance. The Voyage you know is very long; and a World like this he is about, is not to be built in one Hour's time. I know my Soul loves her Body very well, and would be much concern'd at her return, to find it incapacitated to receive her. And an hundred Accidents may happen, againſt which no one can give Security.

We are provided for them all (*ſaid he:*) Look towards the bottom of your Bed. Good God! (*I cry'd out*) ſcar'd out of my Senſes: What

is't

is't I see? The *Devil* then is one of your Club! Wretched Mortal that I am! I am loſt, undone: However I'll die without any familiarity with him. *Monſieur* avaunt. I renounce utterly your Enchantments and your Magick.

Softly, ſoftly (*ſaid he*) why all this Alarm? He is no *Devil* that you ſee, though Black: He's far from being a *Devil*: This is the Soul of a *little Black* that waits upon *Deſcartes*. To eaſe you of all Scruples and Diſquiet in a word or two, I'll give you an Abbreviate of him.

This *Little Black* was formerly *Valet* to *M. Regius* the famous Profeſſor of Phyſick in the *Univerſity of Utrecht*, who, as is known, was then the intimate Friend, Diſciple, and Admirer of *M. Deſcartes*. Upon theſe Accounts he mexited the communication of his Secret, for the ſeparating the Soul and Body. Since that they broke with each other, in ſo much that *M. Deſcartes* thought himſelf oblig'd to Write againſt him. Becauſe he deprav'd his Doctrin, and made it give Offence. *M. Regius*, who if *Deſcartes's* Character be true, was none of the moſt Honourable and gentileſt Gentlemen in the World, to revenge himſelf, and ſhew how he ſcorn'd, and trampled on a thing, *Carteſius* ſet ſo high a rate upon, taught it this litle *Negro*: One time above the reſt, he went to make uſe of it. Returning one day from the Country, where his Maſter had ſent him, much tir'd, he ſate himſelf under the ſhade of an Oak: His Soul left his Body to its repoſe and rambled for Diverſion I know not where. Mean while ſome Highway-men kill'd a Man hard by him. The *Grand Provoſt* who was near, being advis'd of the Murder, came ſpeedily with his *Sergeants*: The Noiſe they made

Diverſes letters de Deſcartes.

was

was such, that it awak't the Body of the *Little Black*: And there happen'd something in the Adventure not unlike that, I told you lately, of *Descartes*. For the *Machine* determin'd by the Noise, and the strong Impression the Presence of arm'd Men made upon his Organ, began to fly. They pursue him, overtake him, and examine him. He contradicts himself at every Word, in his Answers, which, in the absence of his Soul, were not likely to be very coherent. The *Grand Provost* who was a little too expeditious in the Business, took his Flight, and the Astonishment that appear'd in his Countenance and his Words, for an Evident conviction of the Crime, and caus'd him to be hang'd upon a Tree, as an Accomplice of the Murder'd that was committed. The Soul returning not long after, found her Body hanging in that rascally Posture of a *Malefactour*. Forc'd then, as she was, to seek a now Abode, she was in a miserable condition. The majority of separate Souls which play in all the vast extent of the World, being Souls of *Philosophers*, and Souls of great Importance, and having in a Convention held by the most considerable of them, declar'd that Opinion of *Philosophy* true, that holds an enequality in Souls of the same Species: They would no ways admit that the Soul of an ignorant *Negro* should enjoy the same Priviledge as they, and gave her chase througout the Universe. In short, her good Fortune would, that she should, attempt to pass our *Vortex* and arrive at the very place *Descartes*'s Soul had pitch'd upon to Meditate. He had Compassion on her, and allow'd her the liberty to live with him. *Father Mersennus* brought her hither, in Case there should

ſhould be occaſion, and we'll leave her with your Body to take care on't.

The Retail of a Story ſo well circumſtanc'd, induc'd me to credit what was ſaid, as true. I intreated both the *Spirits* to excuſe the Tranſport I was guilty of telling them, that the Figure and Colour he made uſe of to appear in, being the ſame the Devil furniſhes himſelf with all, when he would be viſible, had imprinted on my Mind that horrible *Idea*. I deſir'd them to give me ſome Inſtructions, how I muſt be rigg'd to accompany them in that wondrous Voyage, that they propos'd; ſaying, I hop'd to make infinite Advantage of the Favour they vouchſafed me, and in their Society, to return ſo choice a Treaſure of Knowledge, as would diſtinguiſh me from the reſt of Mankind. Three things, ſay's *Father Merſennus*, you have to do: The firſt is, To diſmantle your Mind of all the *Prejudices* of Childhood, and the *ordinary Philoſophy*. For 'tis ſtrange to ſee how the Prejudices the Soul ſucks in but by the Senſes, ſhould make ſo deep impreſſion on the Underſtanding, with Time and Cuſtom; which ſhe chooſes for the Rule of her Opinions. In ſo much, that Souls ſeparated form their Bodies, otherwiſe than by Death, although during that ſeparation they act independently on the Senſes, do yet think, judge and reaſon conformably to their prejudice. Without that Precaution, you'l make a fruitleſs Voyage, and be but where you are, at your return.

The ſecond Requiſite before our embarquing is, That you give Orders to this *little Spirit*, after what Method he muſt treat your Body in your abſence. Whereupon it is adviſable to let you know, that when your Soul ſhall be in ſtate

ſtate of Separation, all things will be carried on in the uſual Road, not only as to Natural Functions, but as to thoſe Motions caus'd by External Objects; provided that you leave the Machine mounted in the ſame manner, as it is at preſent. So that if you us'd to wake, and riſe at the ſound of an Alarm, or at a certain Hour, as ſoon as that Hour ſhall ſtrike, the Motion of the *Timpanum* of your Ears communicated to your Brain, ſhall make way for the Animal Spirits to glide along the Muſcles, and to produce in your Legs and Arms, and your whole Body, ſuch Motions as daily you your ſelf produc'd, for the taking of your Breeches, then your Doublet, and the reſt of your Appurtenances, after one an other, and dreſſing you from Head to Foot. It ſhall walk as it us'd to do; traverſe all the Houſe upſtairs, and down. It ſhall ſeat it ſelf at Table, as ſoon as the voice of the Page crying *Dinner Sir is ready*, ſhall ſtrike upon its Ears: It ſhall Eat, ſhall Drink, and in a word, perform every Action it has been accuſtom'd to; the Animal Spirits never failing to take their courſe towards certain parts of the Body, at the preſence of certain Objects, and by conſequence producing always certain Motions in the Body, in certain Circumſtances. Now in all External Actions that we do, there is nothing but Motion, produc'd this way. And hence it is that Beaſts who are undoubtedly as Meer Machines as our Body, ſeem to us at the ſame time to act both with Variety, and Uniformity.

The only Miſchief that you need to fear, is, in caſe a Friend ſhould come to viſit you: Becauſe the Body, without the Soul, would be incapable

ble to maintain discourse, and must answer very impertinent to the Thing in hand. For betwixt our selves it is only by Discourse that we *Cartesians* know that those Bodies we commonly call Men, are truly *Men*, and not meerly *Machines*: But herein it is this *Little Negro* will be serviceable. *M. Descartes* hath taught him all the different Motions, possible to be made upon the Pineal Gland; and all the various Determinations, of which the Animal Spirits are capable by its means: And how the Words are form'd in the Mouth, only by the motion of the Muscles that stir the Tongue, the lower Jaw, and Lips: And how particular Words are fram'd, only by the certain Motions of the Muscles, caus'd by that of the Animal Spirits, according to the different Questions, a Friend, suppose, that gives you a visit in the absence of your Soul should propound to you. The *Little Negro* by the various Motions he shall then impress upon your Gland, and, from thence upon the Animal Spirits, and Muscles, shall form without failure in your Mouth the Words that ought to be spoke, and such Answers as the Questions shall demand. And fear not he should make your Body speak any thing unbecoming of your Soul: For I'll say that for him, *Negro* as he is, he is no Fool. *Let. 53. de Disc. Tom. 1.*

You may take yet an other way: It is but leaving your Body in the Bed, where it is, and in the Trance you'l put it by the taking Snush for the separating of your Soul. That Trance which consists in slackning the Senfitive Nerves, is not attended with any further trouble: Mean while, this *little Negro*, shall make your Figure, and shall so exactly Personate you, as if your

Soul had made no expedition: And in that there'l be no difficuty, no more than is in my appearing in the Formalities of *a Friar*, and this Gentleman's in the ſame Phyſiognomy, and dreſs you us'd to ſee him, as I have but juſt now explain'd it to you. And to obſerve to you by the by; you ſee the *Carteſian Philoſophy* teaches without any Sin, what *Apollonius Thyaneus* and many other *Magicians* could not do, without firſt giving themſelves to the Devil.

The third and laſt Thing you have to do, is, To take a little of the *Gentleman's* Snuſh, which he has brought you; ſo we'll hoiſe Sale, and ſtand off for the Road that will bring us to *M. Deſcartes*.

Having return'd thanks to *Father Merſennus* for the Inſtructions and Light he was pleas'd to give me; I aſſur'd him, as for the firſt Article, I durſt undertake; for that I had all along been ſomewhat *Sceptical* in point of *School-Philoſophy*, and that my Mind was free from the contagion of *Prejudice*, that commonly is caught there: And as to the *Prejudices* of Infancy, the reading *M. Deſcartes* had taught me to diſtruſt them. And that whilſt he was Diſcourſing I had arm'd my ſelf with a freſh Reſolution, of aſſenting to nothing but what I ſhould moſt diſtinctly conceive, following *M. Deſcartes*'s advice. I forbore to mention another Reſolution I had made, which was, To fore-arm my ſelf, at leaſt, as much againſt the Opinionativeneſs of the *Carteſians* as the *ordinary Philoſophers*, well knowing they were as much conceited as their Neighbours.

Touching his Directions, that reſpected my Body, in my Soul's Abſence, I cloſed with the ſecond Propoſal; Seeing (*ſaid I*) *Reverent Father*

ther, it seems more simple and feasible than the former. I like it well (*quoth he*) since 'tis one of our *Maxims* in any System, to choose the most simple way, and that which costs least Trouble. However, that was not the Reason that resolv'd me, but because I thought therein less Danger, and was not so firmly persuaded that my Body would be so expert and active in the Absence of my Soul, as was pretended; and also because the Instance of Brutes which was urged, made little Impression on my Mind, unable to discard those Prejudices a Soul capable of Sense and Reason had confirmed. I desired *Father Mersennus* to give Orders to the *Little Black to fute himself with my Person*, to see if it would fit him: Forthwith it was done; and I beheld another *me* at my Beds Feet, as the *Sosia of Amphitryon* saw another *Sosia* before his Lady's Gate, at his Return from the Camp; only with this Difference, that *I* at my Bed's Feet asked very courteously to *me* in the Bed, whereas the *Sosia* who return'd from the Army was well cudgelled by *himself Sosia*, who stood before the Gate of *Alcmena*. I recommended to him above all the fast bolting of my Chamber-door, that no Body might enter, and the frequent visiting my Body Day by Day, and admonishing him to take Care it might always lye in a Convenient Posture.

Upon my *old Sophister*'s presenting me a Dose of Snush, I demanded if it was the True: For I remembred I had heard a Story of one *Apuleius*, that one *Qui pro Quo* metamorphosed into an Ass at the same Time he expected to become a Bird. He told me, he carried but one sort, and that there was no Danger of Mistaking: I then

preſently took it, and ſneezed (God bleſs me) three or four Times, with mighty Violence. Hereupon I fell into a Swoon, like that of *M. Deſcartes*, I deſcribed before, and in an inſtant my Soul, by the only Act of the Will, perceived her enlargement from the Body.

I intend not to enter upon the Retail of Reflections I made upon my Soul, and on my Body, when they were divorced from one another; I will only ſay, I began from that Moment to perceive the Strength of Prejudice and Conceit, in obſtructing the Knowledg of Truth; and how wiſe and rational is the Advice *M. Deſcartes* and his Followers give, precautioning us on that Reſpect, and yet at the ſame time, how little Care thoſe Gentlemen had to make uſe of the Rules they preſcribe to others. For the firſt thing *my Gentlemen* would perſuade me, whether I would or not, was, that my Soul in the inſtant of Separation, ſaw herſelf ſeated on the *pineal Gland*. As I judged it unfitting to begin with them by a palpable Contradiction; I made anſwer, That the Separation was performed ſo heedleſly, I had no Time to make that Obſervation. What I ſaid was true, and was alſo the leaſt diſobliging Anſwer I could find; for I perfectly remembred, and was throughly convinc'd of what I had lately read in *M. Stenon* the great Anatomiſt, who was a great admirer of *M. Deſcartes*, and look'd upon him as the ingenious Contriver of a *Novel Man*, but ſhew'd and prov'd by ocular Demonſtration, this *Man* of his a quite different Creature from *that* which God Created: And that the *pineal Gland* has not the Situation, much leſs is capable of thoſe Motions attributed to it, upon that *Hypotheſis*, That the Veſſels

Anatomie du cerveau.

Veſſels with which it is encompaſſed, are not Arteries, which might ſupply it with the Matter of the Animal Spirits, as *M. Deſcartes* ſuppoſes; but only Veins, that by conſequence the Honour and Priviledge it has given it, of being the Cloſet of the Soul, is without Foundation; and that perhaps it deſerves not to be advanced (upon any more conſiderable Employ it has) above the other Glands, whoſe Office is uſually of no great Importance in an *Animal Body*.

Theſe were my Thoughts, though I kept them to my ſelf; and I was deſirous, as much as poſſible, to accompany them in their Sentiments. I firſt obſerved to them how Digeſtion was performed in my Body, though my Soul was abſent, by the only Vertue of that *Acid Humor* in the Stomach, which, by the Agitation of its inſenſible Parts, diſſolves Meats no otherwiſe than *Aqua Fortis* diſſolves Metals: How the moſt ſubtle Parts, ſeparated from one another, made a Cream-like Liquor, called the *Chyle*: How the *Periſtaltique* Motion of the Guts ſerved to drive down the groſſer Parts, and to give admittance to the *Chyle* into the *Vena Lactea* of the *Meſentery*, through the imperceptible Pores, proportioned to the Figure of the Particles the *Chyle*'s compoſed of: How upon the Heats ſtaying in my Heart, juſt as before, the Blood performed its circular uſual Courſe, continuing all the conſequent Effects, ſuch as Nutrition, and the ſound Conſtitution of the Limbs, placed at the greateſt Diſtance: How, in ſhort all the Motions were carried on, by the only *Clockwork* of the *Machine*.

And here the Sticklers for the old Philoſophy muſt not reſent the Compliance I uſed on this

Occaſion; for if all that was abſolutely falſe, it could never have been true in this preſent Juncture, ſeeing my Body was not corrupted, tho' my Soul had left it; but if the Motion and Circulation of the Humours once had ceaſed, it muſt of neceſſity have been corrupted: Whence it follows, That ſuppoſing my Soul ſeparate from my Body, as I do then ſuppoſe it was, it is plain that all the Motions were performed, and performed only by their Dependance on the Diſpoſition of the *Machine*.

At laſt we thought of ſetting out: I ask'd then what Names and Titles of Dignity or Reſpect Souls uſed to treat each other with in their Spiritual Converſation; for that Souls being in *French* of the Feminine Gender, I was guilty all-a-long of an Abſurdity, in calling the Soul of *M.* by the Name of *Monſieur*, yet I durſt not uſe *Madam* nor *Mademoiſelle*. As for you (*ſaid I to* Father Merſennus's *Soul*) I may eaſe my ſelf of that Trouble for the future, by uſing *your Reverence*; ſo you may, ſaid he, by addreſſing M——s Soul with *your Lordſhip*, both Titles *are all-a-mode* in *Italy*, and arriv'd from thence in *France*. But trouble not your Head about it, we continue the ſame Names we had in the World when in our Bodies, *M. Deſcartes* is *M. Deſcartes* ſtill; this *Gentleman* is what he was before; I am called *Father Merſennus*, as you are *M*——, for we *Carteſians* are a little *Platonical* in the Buſineſs. With *Plato* what's a Man? He's a Soul that makes uſe of a Body: And you may call to Mind a Particular Paſſage among others in *Carteſius his Method*, where he ſays, "Examining with Attention what I was, "and that I could conceive my Body to be no-

"thing

"thing——and on the contrary, if I did sub-
"sist a Moment without thinking, I had no
"Reason to believe I had an Existence in that
"Moment—— I conceived I was a thing, or a
"Substance, whose whole Nature and Essence
"did meerly consist in thinking; so that my
"self (I mean my Soul, by whose means only I
"am, what I am) my self, I say, is a thing
"wholly distinct from my Body. And I wonder
(*added* Father Mersennus) the *Philosophers* and
School-Divines have escaped this Passage, and have
not before this ranked it in the *Catalogue* of his
pretended Errors; especially since *M. Arnauld*
reflected on it by the by. But let's be gone, said
he, and let's make haste, we have lost a whole
half Hour already; Time's very precious: And
with that he Soars up in the Air with the Soul of
the *old Gentleman*, and I without any more De-
murs, set out to follow them.

A VOYAGE TO The World of Cartesius.

PART. II.

THE Weather was very ſerene, the Air extreamly clear, the Moon was in the Full, and the Stars glittered, methought, in an extraordinary manner, which made me wonderful impatient to contemplate thoſe Glorious Bodies more nigh them, whoſe Splendor, Vaſtneſs, Number and Order have been thought a Subject of Admiration by all Ages, the worthieſt Object of the Study and Meditation of *Philoſophers*, and moſt ſenſible Proof of the *Divinity*; notwithſtanding which, my Guides cauſed me to make a Halt upon the Pinnacle of a Tower, raiſed far above the

the reſt of the Town, to obſerve the Nature of the Air of that low Region, and the Parts of which it is compoſed. Come on (*ſays my old Gentleman*) you ſhall know by your own Experience, the Truth of *Deſcartes* his Sentiments, in the Explication of Natural Beings. Remember what he ſays in his *fourth Book of Principles*, that the Air is only an Amaſs of branched and ragged Parts, of the *third Element*, extreamly ſmall, ſever'd from one another, and floating in the middle of the Balls of the *Second Element*, whoſe Motions they obey. See how the Parts of the *Firſt Element* are mingled through the whole, and fill up all the Intervals the little Globules and the branch'd Parts leave betwixt them; how the Fluidity of this Body, as well as all other we call Liquids, conſiſts in the Motion of its inſenſible Parts, which have an indifferent Tendency to any Side; for being they are all in Motion, and have moſtly quite different Determinations, we may readily conceive two things: Firſt, That upon a Liquid Body's ceaſing to be confined and bounded by a Solid one, it muſt diffuſe itſelf on every Side, ſince it's Parts are in a Motion every way. Secondly, That upon a ſolid Body's offering to paſs through, finding all the Parts in Motion, it eaſily makes a Separation; ſince, to do this, 'tis only requiſite to give them different Determinations inſtead of thoſe they had before; it being certain that when Bodies, and eſpecially ſmall ones, are in Motion, a Motion ſo different as that in which the little Parts are found, 'tis the eaſieſt thing in Nature to give them new Determinations, and by conſequence to divide a Liquid Body, and paſs through it. Theſe two Phænomena's then of a Liquid Body,

Body, being explain'd ſo cleverly and ſo intelligibly as you ſee they are, by the *Principles* of Philoſophy; the *Gentlemen Philoſophers of the Schools* would have a great Sway over my Mind, if they would oblige me to acknowledge Fluidity for an abſolute Accident, diſtinguiſh'd from the Motion of the Inſenſible Parts of a Liquid Body.

As much inclined as I was to defend the Intereſts of the *old Philoſophy*, I muſt own this Reaſoning, joyned with that I ſaw my ſelf, made great Impreſſion on my Mind; for though I could perceive no ſuch Thing as the little Globules of the *Second Element*, of which he talk'd, and which was a meer Illuſion of a Soul intoxicated, as much as poſſible, with the *Ideas* and *Prejudices* of *Carteſianiſm*; yet I was forced to Acknowledg in the Air thoſe little inſenſible Parts looſe and diſingaged of one another, that undoubtedly conſtitute all Liquid Bodies. I plainly ſaw that *ſubtle Matter* which *Ariſtotle* himſelf acknowledged under the Name of *Etherial* Matter, and taught to be diſperſed throughout the World, in a moſt rapid Motion. Thereupon I could not diſallow that plain Explication he had made of the Properties of a Liquid Body: And I muſt grant, That were *Deſcartes*'s *Philoſophy* as reaſonable in all its Parts as this, I might be a little tempted to turn *Carteſian*, without troubling my ſelf to diſpute the Globules with him of the *Second Element*, or offering ſuch other Doubts and Scruples as then came into my Mind; with entire Submiſſion I complemented upon all the reſt, both theſe Companions of my *Voyage*; that is to ſay, upon the *ſubtle Matter*, and on that *branchy Matter*, which I termed in their

their Language without more ado, the *Matter of the First and Third Element.* I much applauded their Explication of Fluidity, and commended it for its Neatneſs and Simplicity; but a little Adventure turned the Diſcourſe, and had like to have ſpoiled the Fruit of all my former Complaſance.

There was on the top of the Tower on which we lighted, a kind of a Twirl that was in the Nature of a Weather-Cock, about ſeven Inches Diameter; its Subſtance was of Plate of Steel, very thin and light; its Sails were exactly equal, and the Pin on which it turn'd, ſmooth and poliſh'd: So that the gentleſt Gale of Wind ſet it a going, and at the ſame time turn'd about a bent Iron Rod (for the obſerving the point of the Wind) whoſe end made the Axis to the Twirl. It fortun'd that a *Soldier* of a *Snitz* Regiment that quartered in the Town, diſcharg'd his Musket in the Air: It was loaded with two Bullets, one of which as it flew, but juſt glanc'd upon the end of one of the Flyers of the Twirl: And yet impreſs'd ſo conſiderable a Motion as laſted a long time. The Bullet continu'd its Motion almoſt in a right Line, and went very near as far and as ſwift, as the other Bullet that never touch'd upon the Weather-cock. I had good Reaſon to take notice of that laſt Circumſtance. *Father Merſennus* ſlipt not that occaſion to demonſtrate to me another of *M. Deſcartes*'s Principles. You ſee (*ſaid he*) theſe Flyers; if that Ball had not ſlanted upon one of them in paſſing, ſeeing there is not any breeze of Wind, do you think they would have left that quiet Poſture they were in, and turn'd themſelves about? No certainly (*I reply'd.*)

The

The posture they were in a Moment since, could never have been chang'd for that they are in at present, but by the assistance of some External Cause that has made that alteration. But now (*added he*) that they are in a directly contrary State, do you believe they could quit the same, without the determination of some other Cause that should destroy their Motion, as the Bullet did their Rest? *Father* (*said I*) that Question seems more difficult than the other to resolve: I have heard it always held, as an unquestionable Axiom, That every Body, whilst it is in Motion, tends to its Repose as to its end. We'll grant you (*reply'd he*) that Philosophick Banterage every Body, whilst in Motion, has a tendency to rest, as to its end. A Body is endu'd with Reason and a Will, first to have an end, and then to make unto it. But if that Proposition is capable of receiving any tolerable meaning, it says no more than this, That in the situation and disposition Bodies have among themselves in the World, sensible Bodies that are mov'd do truly lose their Motion by Degrees, upon the opposition they receive from other Bodies, to which it is communicated, and at length they rest. For if nothing did destroy that State of Motion it would last for ever, by the same Rule, that if nothing did disturb the rest of a Body, it would always remain immoveable. And this it is of which I had a desire to convince you, by the Example of this little Wind-mill, Fortune has presented us.

Supposing this Gimcrack had turn'd in the midst of Water, as it does in the midst of Air, it is a plain Case, it's Motion would quickly have been destroy'd by the great Resi-

stance

ſtance the Water would have made. If two of its Sails had been longer, larger and heavier, than the other two, the Motion had ceas'd ſooner yet: Becauſe that inequality would have been another Cauſe of a more forcible Reſiſtance. Again, if you add to this, that the Pin on which it turns had been thicker, as alſo ruſty and unpoliſh'd, the Motion had been loſt ſtill ſooner, for the ſame Reaſon. But becauſe it ſtands in Air, and in Air that's very fine; becauſe it Sails are exactly pois'd, and its *Axis* ſlender, ſmooth and poliſh'd, the Reſiſtance that it finds is leſs, and the Motion ſo much greater, and longer it will laſt. Whence we may thus conclude: Much Reſiſtance deſtroys much Motion; a leſs Reſiſtance deſtroys leſs; and a leſſer yet, deſtroys a leſſer Motion ſtill; and ſo on: Hence, if there was no Reſiſtance at all, the Motion would not flag, but continue always; hence as a Body would maintain its Reſt, unleſs an external Cauſe diſturbed it in the Poſſeſſion of that State, ſo a Body would continue its Motion, as long as it ſhould meet no Moleſtation in it. So then, the great Principle of *M. Deſcartes* is eſtabliſh'd, That a Body of its own Nature ſtays always in the Capacity it is plac'd; if it is at reſt 'twil always reſt; if it is of a Triangular Figure it will be of a Triangular Figure always; if it is in Motion it will for ever be ſo: But for the reſt this Principle is not peculiar to *Deſcartes*, *Galileus* before him, *Gaſſendus*, *Hobbes*, *Maignan*, &c. ſuppoſe it true. And I remember likewiſe, That in making my *Collections* for my *Commentaries upon* Geneſis, where I have introduced an infinite Number of *Philological*, *Philoſophical* and *Aſtronomical Diſſertations*, I have remarked more than

than one Place in *Ariſtotle*, where he either teaches or ſuppoſes the ſame Doctrin; and *Vaſques* one of the ſubtleſt of the *School Philoſophers* has proved it at large, as to the concern of Motion: It may however be ſaid, that no one ever carried it to that Pitch, and uſed it ſo dextrouſly, and with that Advantage as *Deſcartes*; and thence it was that particular Difference and Honour was paid him rather than to others upon that reſpect.

I am much of your Opinion (*I returned,*) That General Principle is without Controverſie one of thoſe, the Mind of Man admits without offering Violence to itſelf; and the Difficulty that is found in applying it to Bodies, conſidered in Motion, proceeds only from that falſe Idea, ſo commonly received, of what we call *Modes* in Philoſophy, and from our conceiting Motion as a *poſitive being*, and Reſt as *its Privation*, though neither Motion is a Being, nor Reſt the Privation of a Being, but one and the other are different and contrary States, of which a Body Natural is capable. But, *Reverend Father*, this Whirl-gig here has raiſed a Scruple in me, of which I'd fain diſcharge my Conſcience; it is grounded on another Principle of *Deſcartes*, concerning which you may call to mind, if you pleaſe, that the Ball that touch'd the Sail, ſeeing it but glanced upon it, loſt nothing, or next to nothing of its Motion, that it had ſo far preſerved, and we ſaw it arrive to its Journey's End as ſoon as (at leaſt was but a Trice behind hand with) the other that never touched at all; and on the other Hand impreſſed a very conſiderable Motion on the Engine: For whether we meaſure the Quantity of the Motion, by the Bulk and

Compaſs of the Body moved; or whether we meaſure it by the largeneſs of the Space traverſed by the Body, in thoſe innumerable Circles it deſcribed, ſpight of the Reſiſtance of the *medium* wherein it turned: Or likewiſe whether we conſider the ſwiftneſs of the Motion, it is manifeſt the Ball communicated much more Motion to the other Body than it loſt itſelf: And on the contrary, granting the ſuppoſition you have juſt made unto my Hands, to demonſtrate a Propoſition of *Deſcartes*; I mean, that the Sails had been unequally ballanc'd, and of a different Bigneſs, that the *Axle* had been Groſs, unſmooth, or ruſty, and that the Ball had grazed on one of the Sails leſs obliquely than it did, it is certain, in theſe Circumſtances the Ball had loſt much more of its ſwiftneſs and its Motion, yet would have impreſs'd or communicated much leſs than it hath at preſent. What now's become of thoſe grand Principles of *M. Deſcartes*? that a Body at the ſame inſtant that it moves another, communicates exactly ſo much Motion to it as it loſes, and preciſely loſes the ſame Quantity it communicates; for here the Bullet communicates a great deal, but loſes little; and in the other Suppoſition it loſes much, and communicates but little: What now becomes of thoſe mighty *Axioms* that lay the Foundation of his *Phyſicks*, and ſupport the whole Frame and Structure of his *World*? That God in the Creation of the World, or Matter, created at the ſame Time in it a definite Quantity of Motion, or *Tranſport* (as he himſelf ſtyles it) from one Place to another, which is always the ſame without Increaſe or Diminution, although the Parts of which the World's compoſed, have ſometimes

Part. 2. *princ.* p. 37. *let.* 72. *tom.* 1.

more

more and ſometimes leſs of it; foraſmuch as what is loſt in me, is of Neceſſity received into another: That God is the univerſal Cauſe of all the Motion in the World: That the Creatures have no Pretence to its Production, and can only determine that produced already, *&c.* For if a Body communicates more than it has in it ſelf, God or the Body it ſelf muſt needs produce the *overplus* of the new; and if a Body loſes more than it communicates, that which is loſt and not communicated, muſt of neceſſity be annihilated. And this is ſufficient to demonſtrate that the Quantity of Motion is not always the ſame in the World, but on the contrary it increaſes and decreaſes every Moment. In a Word, we ſee here a conſiderable Part of Matter put into a rapid Motion that before had none at all. I will ſuppoſe it was in an *Equilibrium*, and that a little thing would turn the Scales; that will not do our Buſineſs, it will ſtill be true to ſay, there is a new *Tranſport* communicated to a large Quantity of Matter: That that Tranſport is no ſmall one, ſince it carries a great deal of Matter through a great deal of Space; yet notwithſtanding the Ball hath not loſt the leaſt imaginable, ſeeing it is carried as far, and as ſwift, within a Trifle, as it would have been if it had communicated none at all. But that which ſeemed of moſt Importance was, the *Immutability* of God, that was intereſſed in this Affair: For the Reaſon why *M. Deſcartes* was ſo zealous to preſerve the ſame Quantity of Motion to a Grain, was becauſe God's unchangable. See where this Trifle now has led us? But what a Miſchief would it be, if this petty Inſtance overturning the Principle of the Quantity of Motion, ſhould ſhatter all thoſe

Seven

Seven fine *Rules* of Motion *Descartes* has establiſhed with ſo exact a Calculation? Mean while they all take it for granted, and ſubſiſt but on the Courteſie of that Suppoſition; however he makes no Scruple to conclude his Explication with this remarkable Paſſage, *All this is ſo evident it needs no Demonſtration.*

But not to loſe Time in drawing other Inferences, methinks, my *Reverend Father*, I may at leaſt with ſome Pretence of Reaſon ſay, *M. Descartes* here has weakly maintained his Reſolution, that he made in his Stove in *Germany*, when he there began to play the Philoſopher; I mean, of avoiding, above all things, a too heady forwardneſs in his Determinations, and the eſtabliſhing any Principle, without examining of it with all poſſible Diligence, and upon greater Evidence than the moſt palpable Demonſtrations in Geometry afford; of having ſo ſtrict an Eye in every thing, and of making ſo exact an *Analyſis* of all the Propoſitions he advanc'd, that he might be certain nothing could eſcape him; for had he guarded himſelf with theſe Precautions, before he propoſed his Doctrin concerning Motion, your *Wind-mill*, and an hundred Inſtances might have come in to his Head, and probably have altered his Opinion, at leaſt prevented him from ſaying, *Theſe things were all ſo evident they ſeemed to need no Demonſtration.* *Part. 2. princip.* *Meth. p. 26 & 37.*

I foreſaw that this Diſcourſe would not reliſh well with my Companions; and I am ſure *my old Blade* began already to repent him of his Vouching for me to *Father Merſennus*, as a Perſon that with an implicit head-ſtrong Reſolution embraced *Carteſianiſm*. The *Good Father* however gently reply'd, That he had obſerved three

Things in my Diſcourſe, a little Malignity in my Reflections, abundance of falſe *Prejudice* that ſtill ſtuck by me, whatever Aſſurance I had given to the contrary, and ſome Difficulties at the Bottom, for the clearing of which it was convenient to diſcourſe *Carteſius*: But let them (*ſaid he*) ſeem as Big and as Frightful as they can, they will preſently diſappear, upon his converſing with you; I have experienced it an hundred Times. No Man was ever more troubleſome to him in Queſtions than my ſelf, which I us'd to make on all Occaſions, even 'till I wearied him. Theſe Difficulties once I thought inexplicable; but one Letter, of about a Page he wrote me, diſperſed all my Doubts, and gave me more Light into the Matters then in Hand, than the entire Volumes of other Men. I much expected the Reproach of Prejudice, for that's the ordinary Refuge of *Carteſius*, and the Gentlemen his Diſciples, when they find themſelves preſs'd a little home: I urged however that Point no further to him; I only excuſed my ſelf from the Malignity he charged upon my Reflections, and upon the Hopes he gave me of the Solution of my Difficulties by *M. Deſcartes*, (*I rejoyn'd*) You exceedingly rejoyce me, Reverend Father, for I am a Carteſian in my Heart, though I am not a through pac'd one in my Mind, wanting ſufficient Light to extricate my Doubts, which the Reading the Books of that Great Man has raiſed in me; but I have a ſincere Love for Truth, and aſſure your ſelf, I ſhall wholly reſign my ſelf up unto her, ſo ſoon as *M. Deſcartes* ſhall preſent her to me.

After that Proteſtation, which ſeemed a little to reinſtate me in their good Oponion, we launch'd

launch'd again: And it will not be amiss to advise my Reader here, this once for all, That whatever Room these Harangues and Disputes take up upon the Paper, they lasted but one single instant, since separate Spirits entertain each other a quite different way from that they use when in the Body, whose Tongue pronounces but one Syllable at a Time; one Spiritual Word that a Separate Soul shall speak unto another Soul, is more full and expressive than a thousand pronounced or written: And since my taking of this *Voyage* I have made a World of fine Discoveries, for the explaining the Way that Angels discourse together; I question not but to be in Print some Time or other upon that Occasion: I confess I shall speak many Things that for want of Use will not be understood; but my *Book* may find no less a Welcome and Esteem for that, but rather the good Fortune Books of *Mysterious Divinity* have met with, that have been for some Time the only ones in Fashion, recommended meerly by their being unintelligible to those that read them, and pretending to be understood by the Composers; for it is known by too manifest Experience, the Authors of those Books are not always such mighty Saints as they would seem.

We parted then from the Top of the Tower, before the Instrument desisted from its turning, and we steered towards the *Globe* of the *Moon*: My Soul perceived an unspeakable Pleasure to scud it in the Air, and to wander in those vast Spaces, she could only travel with the Eye before, when united with the Body; that minded me of a former Delight I had sometime tasted in my Sleep, in dreaming that I whipt

through the Air, without ever touching Ground, above which I thought my ſelf exalted many Yards.

We met upon the Road vaſt Troops of Separate Souls, of all Nations, *Laplanders*, *Finlanders*, *Brachmans*; and I then remembred what I had read in ſeveral Books, That the Secret of ſeparating the Soul and Body was known among thoſe People. But about fifty Leagues on this ſide that Planet, there is a Region very well ſtock'd, eſpecially with *Philoſophers*, and thoſe *Stoicks* for the generality: And quite from that Place to my Arrival at the *Globe* of the *Moon* I deſcryed how ſwingingly Hiſtory belies an infinite Number of Perſons; that it ſuppoſes dead, like other Men; though, in truth, they are no more Dead than *M. Deſcartes himſelf*. I ſhall diſcourſe with ſome of them as I go along.

Olaus mag. l. 3. c. 17. Tert. de anima.

The *Moon* has an Atmoſphere like the Earth, that by a moderate Computation may amount to three French Leagues in height. As we were juſt ready to ſtrike Sail, we made a good Diſtance from us, three Souls that held a very ſerious Conference together; we judged they might be Souls of Conſequence, by the deference many others in their Retinue ſeemed to pay them: Upon our enquiring who they were, we underſtood they were *Socrates*, *Plato* and *Ariſtotle*, that were met in Conſult, for the Publick Intereſt; for that being adviſed by certain News from *our World*, That the *Venetians* had beaten the *Turks*, not only out of *Ancient Peloponeſus*, but alſo the Famous City of *Athens*, where heretofore theſe three Philoſophers had made ſo great a Figure; they had reſolved in their Debate,

ſo

so soon as any *Noble Venetian*'s Soul should arrive in these Quarters, to petition her to recommend their Interest to *General Morisini* and the *Republick*'s Consideration; To require the replacing the Statues the *Athenians* had erected to them; To re-establish the Academy and the *Lyceum* with all their Priviledges, and to restore the Marbles in the *Prytaneum*, whereon was engraven the Justification of *Socrates*, with the Execrations charged on *Anytus* and *Melitus* his Accusers: And in case they should push their Conquests as far as *Macedonia*, to have as great regard for *Stagyra*, at present *Liba nova*, as *Alexander* the Great had formerly on the account of his Master *Aristotle*, whose Country that was. I am surprized, says *Father Mersennus*, to see these *Philosophers*; I never heard any Mention of them here, nor did I ever meet them in all my Travels: It is true, I have observed in my *Commentaries upon* Genesis, That *Plato* and *Trismegistus* used to quit their Bodies, the better to contemplate the Sovereign Good; and that *Socrates*, as *Alcibiades* relates in *Plato*, had from Time to Time such sort of Extasies: 'Tis true also, I never took *Aristotle* for so great a Fool as to throw himself headlong into *Euripes*, for the Madness and Despair of being unable to comprehend the *Flux and Reflux of the Sea*: And many things I have read in that *Philosopher*, induced me to suspect he knew the Mystery of Separation; but I never thought to inform my self whether these Gentlemen made use of it to prevent their Dying. You'll see (*he added*) that as *M. Descartes* has determined to put the Project of his *World* in Execution, that he framed while he lived on Earth, so *Plato* will resolve upon the

Undertaking that of his *Republick*, which we shall see fix'd somewhere in those Vast and Desart Spaces above the Heavens, where he will convoy a Colony of Separate Souls, to constitute his Government.

That supposed (*said my old Gentleman*) *Lucian* had but ill Intelligence from the other World, since in his *Dialogues of the Dead* he often talks of *Socrates* as a Man that had passed the *Stygian-Lake* in *Caron*'s Boat, and as an old Inhabitant of *Hell*. But what, Gentlemen (*said I*) do you say of our Modern *Lucian*, I mean the Author of the *New Dialogues of the Dead*, that without farther Ceremony places *Monsieur Descartes* in *Hell*, and brings him on the Stage discoursing with the pretended *Demetrius* of *Moscovy*? Is it reasonable to think, That Author, upon his entertaining us in that Work with some pretty Things, and diverting us with an abundance of choice Historical Observations, to think, I say, under that Shelter he had Right to put off all the Frolicks of his Imagination, without any regard to Truth? To place *M. Descartes* in *Hell*, at the same Time he's above the *Heavens*, is not this (to express my self in the Quodlibetique Style of our Friend *M*———) *Aberrare toto Cœlo*?

Nouveaux Dial. des Mor.

In the interim we saw the three *Philosophers* advance towards us: 'Tis known they were three of the finest Gentlemen, that have bore that Character in Antiquity, and that they have always been distinguish'd from that Rascality of *Sophists* and *Cynicks* that generally were meer *Andrews*, and only purchased the Reputation of Sages at the Expence of the most abusive Extravagances. *Socrates* made the Address, and in a most

moſt obliging manner told us: He eaſily perceived we were of *France*, not only becauſe we came that Road, but alſo that he ſaw in us the Character and *Genius* of the Nation; which People was the moſt polite at preſent in the World; that though he had but little Commerce with *our World*, he had yet enough to be certified of that Particular. He demanded the Occaſion of our *Voyage*, and whom we were a going.

Father Merſennus took the Word, and made anſwer, We were upon a Viſit to a Friend of ours, that lived at a vaſt Diſtance; that we were happy in timing our *Voyage* ſo exactly, as to have the Opportunity of paying our moſt humble Reſpects to thoſe *Perſonages*, that have given Renown and Glory to Antiquity, and whoſe Names after the Tract of two thouſand Years were ſtill acknowledged and held Venerable by all the Nations in the Earth.

'Tis believed below we are dead, ſaid *Socrates*; True *(replyed* Father Merſennus*)* and I my ſelf was guilty of that Univerſal Miſtake: But here are *two Gentlemen (continued he)* meaning us, that are ſtill Inhabitants of the *lower World*, and who will undeceive it as to that Particular. I ſhall not be ſorry, for my part, anſwered he; and it would not be amiſs to acquaint the People there, That the Soul of a *Philoſopher*, ſuch as I am, ſtaid not to be diſmiſſed from the World by the Decree of a Faction of Corrupt Judges, and the Clamours of a Multitude, incenſed by the Envy and Buffoonry, of a Coxcomb of a *Comedian*. Hear the State of the Matter; well knowing the Rage and Popularity of my Enemies, I thought it not worth while to ſtay, but quitting my Body, I gave Orders to my *Familiar*

Spirit, to enter in my Room, and to put a good Face upon the Buſineſs to the End; being more Secure of his Performance than my own, whatever Conſtancy and Reſolvedneſs I found in my ſelf. He acted his part to a Tittle; and I ſcarce think 'tis yet forgotten in the World, what Conſtancy appeared both in my Looks and Words, when the Sentence of my Death was heard pronounced; with what Undauntedneſs I was ſeen to take from the Executioner the Hemlock-potion that poyſoned my Body, and the Fury of my Accuſers, that were ready to burſt with Malice, to ſee me a *Philoſopher* to the laſt. It is true (*I replyed*) that laſt Action of your Life has procured you a vaſt eſteem among Poſterity to this Day, and I queſtion whether it will make for your Glory, for us to publiſh the true Matter of the Fact, as you have related it. No matter (*ſaid he*) I have ſtill a greater Love for Truth than my own Glory, and am more concerned for *Her* than for *my ſelf*. Moſt bravely anſwered (*I cry'd*) and worthy of your ſelf; That one Sentence is worth all the Oration your *Demon* harangued your Friends with, to comfort them in your Death, and I am reſolved it ſhall loſe nothing of its Value in the Carriage. If one fine Wit of our World had but heard it, he would certainly have canonized you for't; he, I ſay, that in reading your Story, was much put to't to forbear an Invocation, and crying *Sancte Socrates ora pro nobis* (That Extravagance is known to be *Eraſmus*'s, and *Socrates* himſelf thought it very impertinent.)

Ariſtotle next obliged us to diſabuſe the World of thoſe falſe Reports, that were current of his Death; ſome making him dye of the Colick; others

others affirming he poiſoned himſelf; others again, That he drowned himſelf in *Euripus*; theſe laſt came neareſt to the Truth. He told us then, That being diſgraced, and baniſhed from the *Court*, upon Suſpicion he was dipt in the Conſpiracy of *Caliſthene*, his Friend, againſt *Alexander*, he retreated to *Athens*, where he opened his School of *Philoſophy*; That he was there impeached of *Atheiſm*, as groundleſsly as *Socrates*, by a *Prieſt of Ceres*; which obliged him to retire to *Calcis*: That one Day as he was taking a Turn upon the Bank of *Euripus*, and recollecting in his Mind the glorious Advantages he had loſt, of making his Fortune, ſeeing all his Hopes unravelled, that he was for ever diſcarded from the *Court*, and diſcharged from *Athens*, the Melancholy that ſeiz'd him made him reſolve to leave the World; that, to that intent, he made uſe of the Secret *Æſculapius* had left him, from whom he had the Honour to deſcend in a Right Line by his Father *Nicomachus*, formerly Phyſician to his Majeſty King *Amyntas*, the Grand-Father of *Alexander*; he made uſe of it, I ſay, to ſeparate himſelf from's Body, which he left in a Place where the Sea, in a high Tide, chanced to carry it off. Upon the finding of his Body drowned, every one made his Conjectures. The Court, that underſtood what Impreſſion Diſgrace would make upon the Spirit of a Courtier, whoſe Nature it is, more than may be ſuppoſed, upon Temptation, to diſpatch themſelves out of the World, concluded very rationally on the Point; but the Opinion of *Ariſtotle*'s *Diſciples* carried it. At that Time he was about explaining the Phœnomenon of the *Flux and Reflux* of the Seas: He had

had confeſs'd contrary to his cuſtom, that he did not throughly apprehend it: And that vex'd him to the heart. Thence they readily concluded *that* the cauſe of his deſpair. One of them confidently proclaim'd it in ſeveral parts of *Greece*. And as if he had been behind him, when he threw himſelf in the water, added the words he ſpoke unto the Sea, juſt upon his jump; *Since I can not comprehend thee, thou ſhalt comprehend me.* The *Antitheſis* ſeem'd very pretty. That gave Legs to the report, and by that Paſſ-port it arriv'd to us.

There is ſomething ſtrange and new in theſe Particulars as well as in the Story of *Socrates*. And many of the Circumſtances are left out in moſt of the Authours that have treated on this Subject. That encourages me to hope they'l meet with a kind Entertainment from the Publick; ſince tis this that now a days lifts our Hiſtorians unto Reputation, and ſets 'em above the common herd of Writers: And nothing takes ſo much as Paradox in Hiſtory; ſince a Manuſcript that ſhall thwart the long receiv'd Opinions of Mankind, is the only piece in faſhion, eſpecially if ſlanderous and invective, and the Extracts ſent to the *Compilers of the Holland-Journals*, and the *News of the Republick of Learning* to advance the Rate of theſe Books, are fill'd with hardly any thing but rare and admirable Diſcoveries. But tis not on the faith of *Manuſcripts* I ground my Reports, things commonly ſubject to be queſtion'd, but on the Teſtimony of the Perſons mainly concern'd in the Hiſtory, and who have either done or ſuffer'd the thing therein related. And I challenge all the *Burnets in England* to evince me falſe in any thing, by all the *Hiſtories* of the *Kingdom of the Moon*. As

As for *Plato*, he told us, It did not so much trouble his Head, what were the Sentiments of Men concerning him, and thank't us for the offers of our Service that we made him: But Experience convinc'd us of the truth of *Father Mersennus*'s conjecture, touching the *Republick*; and also that had his *Reverence* been a little more conversant in the Affairs of the *Globe* of the *Moon*, he would have made no wonder at his finding *Plato* and *Aristotle* thereabouts; since the first had effectually establish'd his *Republick* there, and the second his *Lyceum*, both which we see geographically describ'd in the Mapps of that Country by *Father Grimaldus* a *Jesuit*, one of the Notablest Mathematicians of the Age. We have nothing of certainty as to *Socrates*'s abode; but 'tis more than probable his ordinary Resort is in his belov'd Disciple *Plato*'s Commonwealth. *Cartes Scienographiques.*

After this little Entercourse, as we were taking leave of these Gentlemen, *Socrates* demanded what Friend it was we went so for to wait on? *Father Mersennus* answer'd, that it was *Descartes*: *Descartes*! (*reply'd Aristotle*:) What that mad Blade that came from the other World above thirty years ago? He that was made the Owl of all the Philosophers, not able to endure him here, and that forc't him to seek out for other Quarters! Truly a very pretty Fellow, that to have treated me so Bully-like, and with that disdain I am told he did: Me, I say, that have been the *Tutour* to the greatest *Prince* and greatest *Conquerour* that ever was! Me, to whose Honour *Philippe* and *Olympias* erected Statues! Me, that have taught *Philosophy* in *Athens*, that have wrote so many *Books* and had a whole *Regiment* of *Com-*

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mentatours! Me whoſe Words had paſs'd ſo long for Oracles, and the deciſions of the Schools; Me, in fine, that all the Philoſophers plume them ſelves as having gain'd unto their Party, and not willing, nor indeed daring to confeſs, I take the contrary ſide! I would fain ſee that bold Merchant venture on the Benches. I have ſeen his Books and pity 'em. Would you gueſs (*ſaid he*) turning haſtily to *Socrates* and *Plato*; what is the firſt ſtep he would have his *Wiſe men* make, in order to his ſafer conduct to the attainment of Truth? He makes him doubt of every Thing, and bids him take for falſe the moſt ſelf-evident Propoſition in the World, that Two and Three are Five, that the Whole, is greater than its Part, *&c.* You know Gentlemen, ſaid he, what work the World have made with him thereupon. For my par't, I'd only ask the Gentleman one Queſtion, Does he ſuppoſe a Man can doubt of every thing, or does he not? If not, Why makes he it the leading precepts of his *Method?* For in point of Precept and Method, 'tis neceſſary they be ſuch as can be put in Practice. If he does ſuppoſe it, how is it he more than once mantains in his *Meditations*, and his *Method*, that the arguments of the *Scepticks*, which were next a kin to thoſe he brings to fetter us in doubts, were never capable of ſtaggering one ſingle perſon, that was in his Senſes as to thoſe apparent Truths? Does he think that thoſe he has to deal with, have loſt their Senſes? Or does he imagine that the Arguments of the *Scepticks* would be more effectual in his Mouth, or in his Writings than in theirs, whoſe only Deſign, for the generality, was to torture and plague the other *Sophiſts* and to make themſelves ſport

In Syropſ Mcait.

Rep. aux Inſt. de Gaſſend.

ſport with thoſe as ſhould indeavour ſeriouſly to confute them? But never dream'd of one *Monſieur Deſcartes* that ſhould one time or other Martial their *Sophiſms* in the Van of his *Method*.

But now ſuppoſing *M. Deſcartes* had induc'd me to doubt that Two and Three made Five; and that the Whole was bigger than its Part; I would fain know what Method he would take to rid me of this doubt, and to replace me in the *Statu quo* of certainty where I was before? This could not be done without the aid of another Propoſition, more evident than the other; which muſt ſerve to convince me, that what I began to doubt, was undoubtedly, not to be doubted of. Now what is with him that high and mighty Propoſition, that muſt brandiſh its Light on all the reſt, and act the Sun among the other Stars? Why: I *think*, *therefore I am*. For, ſays he, 'tis impoſſible to think unleſs I am. Moſt admirably conclu'ded! And is it leſs impoſſible that Two and Three ſhould not be Five; that the Whole ſhould not be bigger than its Part; than 'tis impoſſible I ſhould be miſtaken, unleſs I think, and that I ſhould think unleſs I am? If I could bring my Mind to doubt once of the two firſt Propoſitions, ſhould I be much pain'd to make queſtion of the third? Or if a *Sceptick* ſhould be ſo impudent to deny me thoſe, need he be more, to deny me this? And ſhould not I find my ſelf equally impower'd to demonſtrate to him all the three? *Deſcartes* in that procedure pretends to ſilence a *Sceptick* that challenges him to demonſtrate any thing; or to ſhew him the evidence of a Propoſition, himſelf pretends to have made him doubt of. The *Sophiſt*, reſolv'd to deny the evidence of the plain-

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eſt Propoſition, baffles him: And ſo will I; telling him, I ſtay in the maze of Doubt into which he led me, and am like do to ſo, ſince the Propoſition he brings to expedite me thence, is as blind and dark as thoſe which he made me boggle at before.

But probably (*in purſuance of his humour*) you are charm'd with the wonderful progreſs he makes in his following *Method*. Reflecting, *ſays my Great Philoſopher*, upon that firſt Concluſion, *I think, therefore I am.* I obſerve I am no other way aſſur'd of the certainty of it, than by having a clear and diſtinct *Idea* of what I there affirm: So that I can take it for a general Rule, that whatever I can clearly and diſtinctly conceive, is true. But is this the peculiar of that favourite Propoſition, only *I think therefore I am?* Suppoſing that *Deſcartes* had left me in the capacity I was, and where I muſt be ſtill, in ſpight of Fate, as to the certainty of theſe Propoſitions Two and Three are five, the Whole is bigger than its Part; might not I make the ſame reflection on theſe Propoſitions as he makes on his? And being not oblig'd to invent a Rule of Truth for the *Gentlemen Scepticks*, but only for my ſelf, which I might make uſe of in forming all my Judgments, might not I be allow'd to argue upon my Propoſitions as he does on his? The reaſon why I am aſcertain'd of theſe Propoſitions, that is, why I not only doubt not of them, but perceive, I cannot doubt of them, if I would, is, that I have a clear and diſtinct perception of what I there affirm: And ſeeing I have ſuch an one, can I ſtill doubt whether I have or not? When to have and to judge I have, or rather to be ſenſible I have it, is the ſelf

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ſame act of the Underſtanding. For in effect, from thence it is; from my own Conſcience it is proceeds the impoſſibility of doubting of that Propoſition, two and three are five, as well as of that other, *I think therefore, I am*, as all will agree that we are able to judge any whit nicely in ſuch Caſes. I might then equally from theſe and a thouſand other Propoſitions draw the ſame Inference, *Deſcartes* concludes from his, to make a Rule of Truth on, *What I clearly and diſtinctly conceive is true*. And it is as trifling as abſurd, to make the Certainty and Evidence of ſuch ſort of Propoſitions, depend on the Certainty and Evidence of any other, ſince they are thus certain and evident of themſelves, not from any thing prejudicate or antecedent to them. All of them ſtand on the ſame Square as to their Conviction, and nothing's more unreaſonable or againſt the Rules of Method, than to go to prove them by one another: Hence it is they are called Immediate Propoſitions; and even *Deſcartes* himſelf will own, That that General Principle, *What I can diſtinctly conceive is true*, is no ways a Rule of Truth for ſuch kind of Propoſitions; but that their Rule of Truth, *i. e.* that which convinces me of their Truth, is, as I have been ſaying, the only Experience, and internal Senſe alone my Mind has of that Truth, at the inſtant of forming thoſe Propoſitions.

Ariſtotle, whom the very Name of *M. Deſcartes* had put in Humor, ſtaid not long in ſo pleaſant a Road, but purſued to puſh his Criticiſms home. The greateſt Pleaſure (*ſaid he*) I had in reading that admirable Piece, was to ſee a Man ſo foil, and perplex himſelf, as to lie open, not only to the moſt ſubtle *Sceptick*, but

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to the meaneſt *Logician*, that with three Grains of Wit and Senſe, knew how to inforce the Rules of Logick he has learn'd: With that he run through his *Method*, his *Meditations*, and the *firſt Part of his Book of Principles*, ſo as to let us know, he had attentively examined them. He ſhewed us, in preſenting the Order and Array of *Deſcartes*'s Propoſitions, that no Man ever went ſo prepoſterouſly to work as he, for the Inventing and Eſtabliſhing a Rule of Truth: For that after having made us doubt of all Things, and next, in this dark Paſſage introduced one Spark of Light, *all that we can diſtinctly conceive is true*: He preſently makes us ſuſpect that again by Diſcourſe drawn from his third Meditation. "But "many things which before ſeemed evident, are "become again uncertain; which has determin'd "me hitherto to queſtion, whether Two and "Three are Five: Hereupon it came into my "Mind, That poſſibly there was a God, that "could have made me of ſuch a Compoſition, as "I might be impoſed upon in Things that ſeem "moſt clear and evident: And as often as that "Thought recurs of the Power of God, it is "impoſſible for me not to own, but that, if he "pleaſed, he might eaſily have framed me ſo, "as to be miſtaken in the Things I moſt clearly "conceive: But otherwiſe, upon my ſteady be-"holding thoſe Things I diſtinctly conceive, I "am urged with ſo clear Conviction, as to be "unable to forbear exclaiming. Deceive me "who can; It is impoſſible, ſo long as I think, "I ſhould not be, or that I ſhould not have been, "ſince it is true at preſent that I am; and per-"haps it may be equally impoſſible that Two and "Three ſhould not make Five, and ſo of other

"Things

"Things, wherein I see a palpable Contradi-
"ction. And indeed having no inducement to
"believe there is a God, a Deceiver, and not
"knowing as yet whether there be any at all,
"the Reason that makes me doubtful, being
"grounded but on that Suspicion, is but weak,
"and, as I may so say, *Metaphysical*. But to take
"away this Doubt it self, it is necessary to en-
"quire, Whether there is a God? And sup-
"posing there be, Whether he can be a De-
"ceiver?

Here *Aristotle* began to descant, That *Descartes* had no longer Right to put off that *Axiom* for a Rule of Truth, *All that we distinctly conceive is True*: Seeing he had rendred it suspicious by that Reason, drawn from the Power of God; a Reason that appeared to him so forcible, that it was impossible, whilst he reflected on it, not to own, that God, had he pleased, could most easily have made us so, as to be mistaken in things we most distinctly conceive. This supposed, the Stress he laid upon the Evidence of his other Propositions, could at best but ballance it, and render his *Rule of Truth* a *Probability*: Nay it could not do so much, since it was not to be done, but upon the Strength of the Evidence of the Propositions; a Rule that became a most uncertain and fallible, by that sole Argument, which he found impossible to resist, when he reflected on it: And that the Argument that made him suspect his *Axioms*, though founded on the bare Supposal of the Existence of a God, which as yet he had not examin'd, ought not to be regarded as so weak and trivial, in reference to a Man, that in pursuit of his *Method* acknowledges the Power of God, in case he does exist, extends

to every thing, and poſſibly to the making us ſuch ſort of Creatures as might be deluded in things they moſt diſtinctly conceive. And that, laſtly, it thwarted all the Rules of Method, for a *Philoſopher*, that was yet in Doubt of the Truth of that Propoſition; *All that I diſtinctly can conceive is true:* To dream of proving the Exiſtence of a God, to clear him of that Doubt: For how would he be convinc'd of the Exiſtence of a God, but by ſome evident Demonſtration? And how ſhall he be convinced by ſome evident Demonſtration, ſo long as he ſhall doubt, if what a Man diſtinctly conceives is true?

From whence *Ariſtotle* concluded, *Carteſius* made a Circle in his Method; which is the moſt vile and unpardonable Fault that reaſoning can be guilty of: For, according to him, he could no ways be perfectly ſure of that Principle, *All I diſtinctly conceive is true:* But becauſe there is a God, and becauſe that God is no Deceiver; nor could he know there was a God, and that that God was no Deceiver, but becauſe he knew diſtinctly the Exiſtence of a God, by the Idea he found in himſelf, and becauſe he diſtinctly conceived, That to Deceive was a thing unworthy of God. In a Word, that he proved the Firſt Propoſition by the Second, and the Second by the Firſt, without having the Right to ſuppoſe the Truth of either. But Gentlemen (*continued he, in an inſulting way*) upon your Conſideration, I pardon your *Worthy Maſter* that his unhappy Stumble: It was only a falſe Step he chanced to make in the Dark, notwithſtanding which, he recovered himſelf, and ſtood upon his Legs. He concluded, For the Exiſtence of a God, and many Truths that we undoubtedly and

and clearly know; the Concluſion is true though the Inference be falſe. But you muſt not take it ill if I add one Word more, a diſgracing his *Principles* and *Axioms* one by one, make you ſenſible how ill founded is the Reputation of a Philoſopher, ſaid to Argue concluſively and cloſely. I remember I have read in that *Author* a Propoſition pleaſant enough; *viz.* That God could change the Eſſences of things; That the Propoſitions we call neceſſary are only True, becauſe God will have them ſo: And if God had willed it, as he might have willed it, if he pleas'd, that Two and Three ſhould not make Five, that Propoſition, Two and Three are Five at this Day would be falſe. When *Deſcartes* advances that *Paradox*, he would fain be believed to own a vaſt Reſpect for, and moſt humble Submiſſion to the Omnipotency of God, and is angry with the other *Philoſophers*, and impleads them of almoſt Blaſphemy, for preſuming to ſay, God was not able to cauſe, that Two and Three ſhould not make Five: Yet if you track *Deſcartes* a little, you'll quickly find, That 'tis not altogether for his Devotion-ſake he maintains that *Theſis*, but becauſe that abſurd Tenet was the evident Reſult of ſome other Points of his Doctrin: To have admitted of a Propoſition ſo harſh as that, upon Conſtraint, and as a Concluſion drawn naturally from a Principle of his laying, would not have made much for his Honour, and would beſides have diſcouraged others: That made him think it his beſt way to be before-hand with them, to make the Out-cry firſt, and to wonder how the Philoſophers could be ſo raſh and inconſiderate as to preſcribe Boundaries to the Almightineſs of God. I ſhall not at preſent

In reſp. ad object. 1.

meddle with the Abſurdity of that Propoſition; I deſign not to correct all the Blunders of that Knight Errant of a Philoſopher; it will be too Glorious for him to underſtand I have condeſcended to criticiſe upon him. But to enlarge a little on the Buſineſs in Hand, I ſay, Should all I have urged againſt his Method be falſe; ſhould all the Arguments wherewith the World has baited him, be Void and Null, that *Paradox* alone would totally overthrow him; and let him ſuppoſe it true, 'tis impoſſible he ſhould give us any Rule of Truth: For if it hold, That the Truth of Propoſitions ſo depends on God, as that he could have cauſed thoſe eſteem'd neceſſarily true, to have been falſe, it was in his Power to have made theſe two be falſe; *What I conceive diſtinctly is true: To deceive is an Imperfection.* If God was able to have done it, how knows *Deſcartes* but he actually has? What greater Reaſon has he to believe he hath not, rather than the contrary? Hath God revealed it to him? Upon his Principle, I'll doubt, not only as a *Sceptick*, but now I'll doubt in earneſt; Thus his two Rules of Truth are no longer Rules of Truth. What now betides his Glorious Propoſition, *I think therefore I am?* I have no need to be a *Sceptick* to diſcredit it: Why? Becauſe I know not whether God from all Eternity deſigned it true or falſe. Nor could I purchaſe that knowledge without a Revelation; and ſtill it muſt be queſtioned whether Revelation could ſerve for a Rule of Truth, in theſe our Circumſtances. Thus *Deſcartes Wiſeman*, who had already made ſo far a Progreſs as to know, he *thought*, and that he *was*, is here unfortunately *non-plus'd*. I have a world of Reflections more to make,

make, and I ſhould never be exhauſted if I would enter upon his egregious Metaphyſicks, his new Demonſtrations he pretends to give for the Exiſtence of a God, the Diſtinction of the Soul and Body: Upon his way of anſwering Objections made againſt the reſt of his Method, if I would trouble my ſelf to let you ſee how (when his Propoſitions are attacked, and at once the connexion of them, or the Method he takes to come to the knowledg of Truth) he contents himſelf ſometimes to defend his Propoſitions well or ill, without endeavouring to juſtifie his Method, though that is the Piece in which he has pretended moſt to ſhew his Excellency; and which is the moſt deſpicable of all at Bottom, as I think I have ſufficiently proved to you: But this is enough to ſatisfie you, I have not paſs'd Judgment on your Maſter without ſufficient Knowledg of the Cauſe: And ſince I have delayed you too long, *Gentlemen Carteſians*, I am your moſt humble Servant; recommend me to your *Illuſtrious Doctor*.

Socrates and *Plato* followed him, taking Leave more civilly, and more like *Gentlemen* than he: And *Plato* added, he was tranſported to ſee *Ariſtotle*'s Reputation ſo run down in the World; and that he deſerv'd it were it for nothing, but his Behaviour towards the *Philoſophers* his Predeceſſors, and eſpecially for his ill-natur'd Carriage unto *Plato* himſelf: That he had uſed all Endeavours poſſible to ſuppreſs the Reputation with which they flouriſhed in the World, and had uſed leſs reſerve toward him than all the reſt, although he had been his *Maſter*; and meerly by his Calumnies in Point of Doctrin, he had raiſed himſelf to the Character of *Prince* of *Philoſophers*.

You know not, said I, what Time may still bring forth, and you need not despair of coming in Play again. *Aristotle*'s Philosophy has had many Turns of Fortune within this Fifteen hundred Years; and I'll tell you, as a Piece of News from our World, That hardly more than fourscore Years ago, the *Sovereign Bishop* of the *Christian Church* was upon putting forth a *Placate*, commanding your *Philosophy* should be taught at *Rome*, instead of *Aristotle*'s, and he had gained the Point, but for a great Man of that Time, called *Bellarmine*. If that had once passed at *Rome*, there had been a Fatal Stroke to *Aristotle*'s Philosophy, and *yours* had carried it all the World over. You at once surprize and please me, (*repiyed* Plato) I am extreamly Glad, and most highly obliged to you for this News: *Aristotle* shall know it, and I'll imploy it to revenge the Insult of his late Discourse.

Mean while my two Guides were enraged to hear their *Master* treated in so vile a manner; they had waited the End of his Discourse, to answer it, but observing him troop off without giving them the Opportunity, they endeavoured, what they could to stop him: As they saw it was in vain, the *old Gentleman* raillying, hollow'd him at a Distance, So ho, *Good Monsieur Aristotle*, where may a Man find your *Sphere of Fire?* we have not met with it in our Voyage; though your Books give us Intelligence it was placed above the *Air*, and yet below the *Moon*. For my part I was highly gratify'd with that Encounter, and Discourse; I had the Pleasure to observe, That *Spiritual Philosophers* no more than *Corporal* could forbear disputing, and were no less jealous of their Sentiments and Reputation.

I had

I had the Happineſs of this Diverſion more than once in my *Voyage*, upon ſeveral Occaſions; of which I ſhall give account.

After the Departure of our *three Philoſophers*; well, (*ſaid I to* Father Merſennus) what think you, *Father*, now of *Ariſtotle?* Indeed he ſeemed to me a litte hot; but after all, methinks he's no ill Diſputant: That way of tracing *M. Deſcartes* ſtep by ſtep in his *Method* of the re-ſearch of Truth, is very maliciouſly deſign'd, and capable of raiſing Scruples, eſpecially that laſt Argument taken from the Truth of Neceſſary Propoſitions, that with *Deſcartes* have their Dependance upon God, ſeemed perplexing enough: And I do not remember that any one has before hit upon the Uſe that he hath made on't.

Stuff! meer Stuff! (*he replyed*) All that *Ariſtotle* has ſaid, ſcarce any thing was tolerable but the Circle he charged upon *Deſcartes*; and that's an antiquated Objection; I my ſelf have touched upon it heretofore, as you may ſee in the *Second Objections*, that come after his *Meditations*, which are my own as well as the *Sixth*. I am glad I know ſo much, (*I returned*) they be both moſt worthy of you, and admirably propoſed, and I am very well ſatisfied, That Circle is ſomething more than imaginary; for 'tis not to be ſuppoſed, that *Father Merſennus*, *Ariſtotle*, *M. Arnauld*, who is the Author of the *Fourth Set* of *Objections*, and ſeveral others, had all met in the ſelf-ſame Point, but that there was ſomething in it very like at leaſt, what they there apprehended. But under the Roſe, do you take that anſwer *M. Deſcartes* gives to get out of that unlucky Circle, and that no one ever yet has

took in hand to be ſatisfactory or fit to be received? He anſwers, That in ſaying, We knew nothing certainly, before our Conviction of the Exiſtence of a God, he had expreſsly noted, That he only meant it of ſome Concluſions that might come into our Mind, at the ſame Time we reflected not on the Principles, from which they were derived.

It would perhaps be ſomewhat difficult to make that Propoſition capable of any tolerable Senſe; but 'tis the eaſieſt thing of an hundred to ſhew it to be a meer Fetch and Evaſion; and to diſprove the Truth of the thing itſelf, it is but reading the ſame Place *Ariſtotle* now cited, of his *Third Meditation*, *Page the thirty fifth and thirty ſixth of his Method*, *Number the fifth of the firſt Part of his Principles*; and one ſhall ſee he there makes us doubt of all, even of Principles that carry with them their own Evidence; including that Principle itſelf, *What I diſtinctly conceive is true*, by the Suſpicion we have there is a God, who could ſo have conſtituted us, as we might be miſtaken in things moſt clearly apprehended: So that when he ſays, We know nothing ſurely, before the Knowledg of a God, he ſpeaks not only of ſome certain Concluſions that ſtrike upon our Mind, ſeparately from their Principles, but of all ſorts of Knowledg, and of that it ſelf, *What we diſtinctly conceive is true.* And hereupon it is your ſelf, *Ariſtotle*, *M. Arnauld* and others, have trapt him in a Circle.

I own, That Anſwer may be found in ſome of his Letters, occaſioned by the ſame Objection ſtarted to him afreſh. I know that he repeats it not by way of Anſwer, but couching it cunningly

ningly in the *First Part* of his *Principles*, where he gives us an Abstract of his *Method*, and his *Meditations*; but that's no *Salvo* to the Business. Besides, those Words have a very ill Effect, in the *First Part of his Principles*, for they unhappily stand so near the other, that make us doubt of self-evident Propositions, because of the Suspicion we have of a God, that, may be, employs his Power to deceive us; that the Contradiction plainly strikes our Eyes.

Nor has his famous Proposition, *I think therefore I am*, any better Success; for having given us that Proposition as the first of which we could be assured, we might demonstrate to him, That cannot be the first, since its certainty necessarily supposes the Truth of some others, and in those of these: *It is impossible that that which thinks should not be; it is a Contradiction for any thing to think, and yet not be in the instant that it thinks.* The Proposition (which is very remarkable) by which he proves that other, *I think therefore I am*, at the same Time he pretends it to be the first of all. He declares then, That when he says, that Proposition, *I think therefore I am*, is the first and most certain of all those which offer themselves to the Mind of a Man, who observes Method in Philosophy; he pretends not to deny but that he must be certain of this before; *It is impossible that he that thinks should not be*; as also of divers others. Joyn this Acknowledgment with what he says in the *foregoing Page*, "We "must likewise doubt of other Things, which "we held most certain, of *Mathematical Demon-* "*strations*, even of Principles that we thought "self-evident until now: What are then self-evident Propositions if not these? It is a Contradiction,

tradiction, That a thing ſhould be and not be: A thing cannot be, and not be at the ſame Time, cannot act, and not be, and the like. He then ſuppoſes not the Truth of theſe Principles, becauſe he doubts of them. And in Truth, the Reaſon he brings to make us doubt of ſelf-evident Propoſitions extends equally to all. We muſt doubt, ſays he, of Principles that we call ſelf-evident, becauſe we have heard there is a God, who can do all Things; and who knows, but he may have ſo contrived us, as we might always be deceived, even in things that ſeem moſt evident? And be pleaſed to recollect, *my Father*, what *Ariſtotle* ſaid in Concluding; That *Deſcartes*'s Propoſitions were leſs to be found Fault with than their Connexion and their Diſpoſal in his Method that he takes to come to Truth; and that the Truth of ſome certain Propoſitions was not abſolutely conteſted, but only with reference to the Method that he takes, by which he forfeits the Privileg to ſuppoſe them, be they as true as may be, ſince according to that Method he is diſabled from acquiring the Knowledg of their Truth. And it is upon that account, probably, he was put ſo out of Humor with *Gaſſendus* and *Father Bourdin* a *Jeſuit*, who were thoſe that chiefly cloſed with him in that Lock. Their Scruples are propoſed in a lively manner in *Latin*; and it were well if the *French Tranſlation* equalled the *Original*. But upon the mentioning the *French Tranſlation*,

Give me leave to add one little Remark, I made a few Days ſince, and thought not fit to communicate to others. *M. Deſcartes*'s dear Diſciples being poſſibly put to it (at leaſt I ſo imagine) to diſengage their Maſter of thoſe petty

petty Perplexities, of which I have been ſpeaking; in the *French Verſion*, that has been put forth, of his Works, and which had his own Approbation, have ſomewhat ſweetned that diſtaſtful Propoſition, in the firſt Part of his Principles. The *Latin* has it thus, *Dubitabimus etiam de reliquis, quæ antea pro maxime certis habuimus: Etiam de Mathematicis demonſtrationibus, etiam de iis principiis quæ hactenus putavimus eſſe per ſe nota.* It would be natural to render it: We will doubt of other things, which before we held moſt certain; alſo of Mathematical Demonſtrations; alſo of thoſe Principles which hitherto we thought ſelf-evident: They have turned it ſo, I ſay, in *French*, as to make us believe, That *M. Deſcartes* ſpoke not of ſelf-evident Principles in general, but only of Mathematical: *Nous douterons auſſi de toutes les autres choſes qui nous ont ſemble autrefois tres certains: Meme des demonſtrations de Mathematique, & de ſes principes, encore que d'eux-memes ils ſoient aſſez manifeſtes.* We will doubt alſo of all thoſe things we heretofore eſteemed moſt certain, even of the Demonſtrations of Mathematicks and their Principles, though they are ſufficiently manifeſt of themſelves. If this was deſignedly done, as one may reaſonably ſuppoſe, it was a little Innocent Legerdemain, that obliged *Deſcartes* and injured no Man; and prevented at leaſt the Contradidiction ſhould be viſible. But to return to the Anſwer *Deſcartes* made to the Circle alledged, What think you *Father*, is't a good Defence? Or is it not to make a Retreat and Capitulate with his Enemies? Or rather, to ſpeak more plainly and truly, to unſay and contradict? In good Faith, Father, declare it ingenuouſly; you have treated

Monſieur

Monſieur Deſcartes ſomewhat like a Friend, or rather as a generous Enemy, you have diſarmed him: He was a Man that ſcorned to beg his Life; you foreſaw too how high he'd carry it after the Combate, and ſtill would challenge all he met with; yet for all that, you have thought fit to give him Quarter, as a Man that did deſerve it in Conſideration of thoſe other great Services he has done Philoſophy: I applaud your Generoſity, and you have no reaſon to repent on't.

That little Softning, with which I temper'd the Harſhneſs of my Criticks, had its deſign'd Effect, which was not wholly to ſowre *Father Merſennus*. He took it graciouſly enough, and only anſwered in a rallying way, You are a very Wrangler, and delight to find a Quarrel; and the Humor that I ſee you are of, had you lived in *Deſcartes*'s Time, you had certainly incurred his ſpending a whole Chapter on you. But all that you ſay comes to juſt nothing, as I could eaſily convince you; but the Diſcuſſion of Fact, and Contradiction is too tedious an Employment for us Travellers. I perceive too *Monſieur* is tired already with it, continued he, in ſhewing me the *old Gentleman*, and only wants a Mouth to yawn. Come, ſays he, *Monſieur*, you ſeem ſomething Melancholy, brighten a little, brighten; What do you think of?

Think? of nothing ſaid he. How *Monſieur*, (*I replyed*) What's that you ſpoke? certainly Blaſphemy againſt the Doctrin of our Maſter: If *Ariſtotle* had heard you, what would he have ſaid? Do you *think* of nothing? So, What's become of the Eſſence of the Soul, that according to *Deſcartes* is *thinking*? I had as lieve you'd tell

tell me that you have no *Being* as that you do not *think*.

He took me up in a very ſerious Air, which ſufficiently beſpoke a greater Diſpleaſure my Words had given him, than *Father Merſennus* before. You put a perverſe Conſtruction on my Propoſition, which meant no more, than that my Mind was not poſſeſſed with Melancholy *Ideas*, as you thought: I am heartily glad, *Monſieur*, *ſaid I*, for Gayety and Briskneſs are never more neceſſary than in a *Journey*: But ſince we are fallen bechance upon the Eſſence of the Soul, I could wiſh you'd plainly expound what *Monſieur Deſcartes* has ſaid thereon; for as pure a Spirit as I am, I have no clear inſight into my own Eſſence; and I wonder at it. A very ill Sign, *ſaid he*, that's as much as to ſay, your Intellect is benighted ſtill with Prejudice, and which I have already too much perceiv'd in you: And I well obſerve, that Novice which we lately met has raiſed freſh Scruples in you by his *Sophiſtry*. *Monſieur*, I replyed, to uſe no Diſguiſe with you, I'll frankly lay open the Diſpoſition of my Soul, in which I find it. I am raviſh'd in my Thoughts to meet with thoſe that contradict *Deſcartes*'s *Philoſophy*; that opens and enlarges my Mind: But how ſtrong ſoever their Arguments appear, I ſecure my ſelf againſt them, and ſtill reſerve my Mind docil and tractable for the Inſtructions of that great *Genius*, ſuppoſing he has the Leiſure or the Goodneſs to beſtow ſome on me, when I ſhall have the Happineſs to ſee him. As for the Preconceptions of the Schools and Childhood, I have for the moſt part quit them, as I paſſed my Word before I undreſſed me of my Body: Yet I confeſs ſome

ſtill

ſtill remain, concerning the Eſſence of the Body, and the Eſſence of the Soul, which I hardly can call by that Name, in the ſignification you imploy it, ſince they ſeem grounded upon Experience and on ſolid Reaſon. I have however too great a Deference for *M. Deſcartes*, to be throughly confirm'd that they are not falſe; ſo that I am willing to acknowledg, to ſpeak in finer Language, a gloomy kind of Darkneſs overcaſts my Mind in thoſe Particulars; and I have not yet obtain'd the Priviledg of *Carteſian Souls*, to have moſt diſtinct *Ideas* of thoſe two kinds of *Being*, which make up the World. But once more I ſhall ſubmit to your Inſtructions and *Deſcartes*'s.

He then began to explain the Doctrin of *Carteſius* thereupon, but ſaid no more than I before had read in his *Meditations*, in his *Method*, in the *firſt part* of his *Principles*, and in ſome of his *Letters*. I ſhall not here give any Expoſition of that Doctrin, becauſe I ſhall have an occaſion to ſpeak of it upon an Adventure that befel us in the Globe of the Moon. I pretended out of Complaiſance to have a better Taſte of it than before, and to find more Solidity in it than when I read it by my ſelf. That acknowledgment reſtated my Companions in their jocular Humour, who after much Merriment and Droll, upon *Ariſtotle*'s Philoſophy, wheel'd about unto his *Sphere of Fire*, which according to his Map of the World ought to be ſituated under the *Moon*, of which yet we ſaw not the leaſt ſign or footſtep in our *Voyage*. They were very Severe and Witty thereupon, and reminded me of a Suit commenc'd ſome years ago, by the *Peripateticks* againſt the *new Philoſophers*, for diſturbing them

them in the poſſeſſion of that *Sphere*, warranted by the Preſcription of ſo many Ages; and of a Decree made in favour of the *Ariſtotelians*, purſuant to a falſly ſuppos'd Survey they had taken of the place. 'Twas ordered that the Sphere of Fire ſhould ſtill remain where *Ariſtotle* had pitch'd it. Now as that Decree, ſay they, was a Decree upon *Requeſt* and not *Contradictory*, the new Philoſophers may revive the Action, and bring the Proceſs to a ſecond Hearing: And in that Caſe you are able to give evidence of the Truth, and convict the Peripateticks of the invalidity of their Titles, in a Concern of that Importance.

You may ſay what you pleaſe, ſaid I, tho' that *Sphere* is not now to be found; If I was to judg in that Action, I ſhould not ſo readily condemn *Ariſtotle*. It may have been diſpers'd, and ſpent in the ſpace of almoſt two thouſand years: For that many Stars that have formerly appear'd in the Heavens now diſappear: What's become of the ſeventh *Pleiade*, and of that ſeen the laſt Age in the *Conſtellation* of *Caſſiope*? And ſuppoſing any one, ſince its ceaſing to appear, ſhould bring his Action againſt *Tyco Brahe* and others that obſerv'd it, as falſe Intelligencers, that abus'd the credulous World, do you think it would not be thrown out? And does not *M. Deſcartes* himſelf give us to apprehend that our *Vortex*, infinitely greater than the *Sphere of Fire*, ſhall be ſometime ſwallow'd up, when one leaſt thinks on't? And when by that Abſorption the Sun ſhall become an Earth, and perhaps at once the ſubtil Matter which is confin'd in the Centre of our Earth, forcing its Paſſage through the Cruſts that cover it, ſhall make that a Sun; grant-

granting that the Books of *M. Deſcartes* exiſted in another *Vortex* where are Men, would not they look on all he has wrote of our World as Fabulous and *Romantick?*

However, granting that there never was a *Sphere of Fire*, it was ever admirably ſuppos'd. Never was *Syſtem* more exactly contriv'd than *Ariſtotle*'s of the Elements. They all are rang'd according to the Dignity or Meanneſs of their Nature. The *Earth* as the moſt unactive and ignoble Element, has the loweſt Seat. The *Water*, leſs courſe and heavy than the Earth, takes place above it. The *Air*, by reaſon of its Subtilty, is exalted higher than the Water. And the *Fire* the moſt noble and moſt vigorous of them all, owns no Superior but the Stars, and the ſubtil Matter in which ſwim the Planets. The extent of each is likewiſe proportion'd to the Merit of their Nature: Like Brethren they have divided the Eſtate of the four Qualities, each of them has two, one of which in the Superlative Degree. The *Earth* is cold and dry, the *Water* is cold and moiſt, the *Air* is hot and moiſt, the *Fire* is hot and dry. And to the end they may bear up ſtill, in the perpetual Combats they give each other; if the prevaling Quality of one's more active, the predominant Quality of the others put them in a good poſture of Defence againſt the effort of their Enemy. Could any thing be more juſtly or ingeniouſly imagin'd? In fine, with how many fine Thoughts has that *Sphere of Fire*, and that orderly Diſpoſition of the Elements, furniſhed our Preachers heretofore, and ſtill ſupplies thoſe of *Italy?* But to mention ſomething better in its kind, that one *Deviſe* of *Father le Moine*, of

which

which the *Sphere of Fire* is the Subſtance, deſerves there had been one, and would deſerve there ſhould be one ſtill, and that it ſhould endure for ever. Deſigning to ſignifie the more *pure* are Friendſhips, the more *durable* they are, he painted the *Sphere of Fire*, with this *Spaniſh Motto*, *Eterno porque Puro*. This Fire's Eternal, becauſe it's pure. What an unhappineſs it is that that Thought ſo fine and ſolid as it is all over, ſhould at laſt be falſe for want of a *Sphere of Fire?*

Thus I was defending as well as I could, the *Peripatetick Intereſt*, whilſt we arriv'd at the *Globe* of the *Moon*. I ſhall not be tedious in giving a large Deſcription of it, ſince others have don't before me. I will only ſay that the *Earth*, look't to us that view'd it from the *Moon*, as the Moon appears to thoſe that view it from the *Earth*, with this difference, that the *Earth* ſeem'd bigger far, becauſe it really is ſo. So we judg'd that the Earth, in reſpect of thoſe that beheld it from the *Moon*, had the ſame *Phaſes* as the *Moon*, in regard of thoſe that behold it from the *Earth*; that it had its *Quadratures*, its *Oppoſitions*, its *Conjunctions*, except that it could never be totally Eclips'd, by the reaſon of its greatneſs in compariſon of the *Moon*, whoſe Shade could not have a Diameter ſo large as the Earth then in Conjunction.

The *Moon* is a Maſs of Matter much like that of which the *Earth* is compos'd. There you have Fields and Foreſts, Seas and Rivers. I ſaw no Animals indeed, but I am of Opinion if there were ſome tranſported they would thrive, and probably multiply. 'Tis falſe that there are Men there, as *Cyrano* reports; but 'twas *Empire de la Lune.*

undesignedly that he deceiv'd us, having first been deceiv'd himself. One of the separate Souls which we found in great Multitudes, and which were there at his Arrival, told me the Original of that Error. A great Company of Souls surpriz'd to see a Man with his Body, in a Land where the like was never seen before, had a mind to know the meaning of it. They agreed together to appear in Human Shape to him: They accost him, and enquire by what Method he accomplish'd so great a *Voyage*: Made him relate what he knew of *our World*; and as he seem'd equally inquisitive as to the Transactions of the *World* of the *Moon*, and the Life the Inhabitants led there, the *Familiar Spirit of* Socrates, who was among the rest, took upon him to answer: And having declar'd who he was, as that *Historian* himself relates, he made him upon the Spot, a Fantastical System of the Republick and Society, which is the same he gives us in his Relation, where he seriously tells us, There are Men in the *Moon*; characters their Humour, describes their Employments, their Customs and Government. But 'tis worth the knowing that some Fopperies he has inserted, he brought not from that Country, as the Soul assur'd me; and that many Profane Allusions and Libertine Reflections he there makes, were only the Fruits of a debauch'd Imagination and a corrupt Mind, such as was that *Historians*, or of the Imitation of an *Author*, yet more Atheistical than himself. I mean *Lucian*, one of whose Works was made the Plan to his *History* of the *Moon*.

The Inequalities we found in the *Globe* of the *Moon* are partly Isles, wherewith the Seas there are pleasantly chequer'd, and partly Hills and Vallies

Vallies in its Continent. They belong to ſeveral famous *Aſtronomers* or *Philoſophers*, whoſe Names they bear, and who are the high and mighty States there. We landed in *Gaſſendi*, a Seat extraordinary fine and very appolite, and ſuch in a Word as an *Abbot*, like *Monſieur Gaſſendus*, could make it, who wanted for neither Genius, Art nor Science, and who had no uſe for his Revenues, in gaming treating and living high. The Lord of the Mannor was then abſent, whom we ſhould have been glad to have waited on, ſince we heard that he ſtill continu'd his Civility and Moderation, which were his Natural Endowments. And though formerly there were ſome Miſunderſtandings betwixt him and *Carteſius*, yet he always very obligingly, and with a Mark of Diſtinction, entertain'd the *Carteſians* that came to pay a Viſit, and eſpecially *Father Merſennus*, who was his peculiar Friend. He was a Man that equall'd *M. Deſcartes* in capacity of *Genius*, excell'd him in the reach and extent of Science, but was leſs heady and conceited. He ſeem'd ſomewhat a *Pyrrhoniſt* in Natural Philoſophy, which in my Opinion is becoming enough of a Philoſopher, who provided he looks into himſelf, muſt know by his own Experience the Limits of a Human Underſtanding, and the ſhort Sightedneſs of its Views.

From *Gaſſendi*, *Father Merſennus* conducted us to the *Land* that bears his Name. It is very conveniently ſituate upon the ſame Coaſt, as *Gaſſendi*, bordering upon the *round* Sea, which others call the *Sea of Humours*, which is a great *Gulph* of the *Lunary Ocean*, bounded on one ſide by the Continent, on which lies *Merſennus*, and on

the other by an *Iſthmus*, at the end whereof, Northwards, is a *Peninſule* call'd *Dream-land*. *Merſennus* is only commendable for its Situation and Proſpect, being a very hosky and barren Country by the reaſon of the abundant Heat there, from which it has taken a Name, and is call'd *Hotland*.

We ſtaid in this place about half a quarter of an hour, when I intimated to *F. Merſennus*, that before we proſecuted our *Journy*, I ſhould be glad to traverſe the *Hemiſphere* of the *Moon* wherein we were. That *Hemiſphere* always faces our *Earth*, and 'tis falſe that the Moon turns upon its Centre, as ſome imagine: It only has a Motion of Vibration, which weighs it from Eaſt to Weſt, and from Weſt to Eaſt, which Motion *Galilæus* firſt perceiv'd, having obſerv'd by a Tube, that the place we call *Grimaldi*, is ſometimes nearer and ſometimes farther off the Oriental Zone of the *Moon*, and that the *Caſpian Sea*, oppoſite to it, is ſometimes nearer and ſometimes farther off the Occidental Zone. *Father Merſennus*, willingly conſented to my Propoſal, for as much as he himſelf had never made that *Voyage*. We croſs'd the *great Ocean*, leaving on the left Hand the *Iſle of Winds*, and on the right, that of *Copernicus*, and paſs'd over that of *Pitheas*, ſtill puſhing on quite to the *Sea of Rains*, which is bounded by a vaſt *Land* ſtretch'd from Eaſt to Weſt, much like that of *America*, as it is decypher'd in the Maps; whoſe Eaſtern part is call'd *Fog-land*, and the Weſtern *Hail-land*, both ſeem'd like two mighty Deſerts. Towards the middle of that Land, upon the Shore of the *Sea of Rains*, we diſcover'd a kind of a large Town, of an oval Figure, which

we

we had the Curiosity to go to see; but we found all the Avenues guarded with Souls who deny'd us Entrance, tho' civilly and obligingly enough. We demanded of one of them, What Town that was, and why there was no Admission? He answer'd, it was call'd *Plato*, and was the same where that *Philosopher*, whose Name it bore, had establish'd his *Common-wealth*; that no Persons were admitted there, which he himself had not first examin'd, which Caution he observ'd, for fear some Stranger should bring thither the dangerous *Maxims* of the *other World*, which were the only Pestilence that *Republick* had to fear; that *Plato* was not at home at present, but would return in a little time; and in Case we desir'd to have Admission, we might, waiting the return of *Plato*, commence our Quarantine at *Lazaret*, which was a little Seat upon a rising Ground, we saw some distance from the Town; that that Quarantine was not a Quarantine of days, but a Quarantine of Years; because the Contagious Diseases a *Spirit* was tainted with, were purg'd off with far greater Difficulty than the Pestilential Airs of *Bodies* are dispers'd, which come from infected Places. We thank'd him for his offers, and told him, We came not there with a Design to settle, but that we were going farther; that if *Plato* had been in Town, he probably would have had some Condescension towards us; that we had met him in our Journy, and had receiv'd great Civilities from him: And that we must endeavour to be contented upon the disappointment of our Curiosity, on that occasion. So we bent on our Journy, dissatisfied enough, from the *Republick* of *Plato*, where we little thought they had treated Strangers as they do in *China* and *Japan*.

From thence we travell'd over all that Land from North to South, after which we diſcover'd another Sea, call'd the *Sea of Cold*, in which ſtood a very fair *Iſland*, which they ſaid was *Ariſtotle*'s; we made no Debate whether we ſhould take it in our Road: The only Queſtion was, Whether if we were ask'd who and what we were, we ſhould declare our ſelves *Carteſians*? It was my Sentiment not to carry it ſo high in an Enemies Country: But Father *Merſennus* and my *chil Gentleman*, concluded for the contrary, without more ado adding, there was nothing we need to fear; that if we were beſet we had wherewithal to defend our Selves, and in point of Spiritual Aſſaults, the Number came not in the Account; that it was not the firſt time, there had been ſeen a *ſingle Carteſian*, that fronted with good Succeſs a *Claſs* of four hundred *Peripateticks*, marſhall'd by a *Regent* of conſummate Experience. Only we muſt keep a ſtrict Guard upon our ſelves, to offer no Inſult or Raillery, that might give Offence to thoſe we converſed with.

But it was a great Surprize to us upon our Approach, to ſee this Iſland under a ſtricter Guard than that of *Plato*. They were there in Battel Array, as in a Town that had the Enemy at the Gates, and expected the next News ſhould be of being begirt with a cloſe Siege. There was your Court of Guards advanc'd far into the Field, your Centuries upon all the Hills round about, and Scouts and Intelligences in all parts of the Air. As we came within three hundred Paces of the place, we ſaw a Detachment of about a dozen Souls, drawn from the Court of Guard, approach us. He that commanded them

gave

'gave the Word, Stand, who's there, and to what Sect do you belong? Our old Veteran undauntedly cry'd, Long Live *Descartes* and the *Cartesians*. He was amaz'd at the Reply; ordered us not to stir a step, and forthwith dispatch'd an Advice to the *Officer* of the Guard.

No sooner the Advice arriv'd to the Officer, but all his Troops at a Signal given, were arm'd *capape*, and gave us to understand by their looks they were in readiness to receive the Enemy: That is, they were accoutred with *Syllogisms*, in all sorts of *Modes* and *Figures* whereof some concluded for the *Soul of Beasts*, others for the necessity of *Substantial Forms*, in mixt Bodies; others for *Absolute Accidents*, and such like Things, against which *M. Descartes* had declar'd. The *Officer* himself coming up, we presently knew him. He had been an ancient Professor in the *University of Paris* and formerly my *Regent* in Philosophy: O God! said he, adressing himself to me, and must I have the Affliction of seeing you on the side of our Enemies condescending even to the servil Office of a Spy? Is this the Recompence you make for the Pains I have taken? Have you met with a course of Philosophy, comparable to mine, which was then reputed, the most gentile and solid in the whole *University* of *Paris*? Where's that Respect and Submission you own'd in your greener years, for the Prince of Philosophers? What Obligation had you to take up arms against him? *Monsieur* (*I reply'd*) I still preserve that Respect, that Esteem and Friendship for you, which I owe, inviolable, and I take it for a peculiar favour of Fortune to meet you here, to make a fresh Protestation of them. And I assure you, that

I am neither come in quality of a Spy or Enemy, but if you pleaſe ſo to receive me, of a *Voyager*: 'Twas purely curioſity that brought me hither, by the way. As to the concern of Philoſophy, I muſt acknowledge I am a little *Sceptical* in that Matter, and know not at preſent what I am. I am reſolv'd to try all Sects before I am determin'd; ſo that you may, Sir, look upon me as a Man of an unintereſted Country, and that contrives no Plot or Miſcheivous Deſign againſt your *Commonwealth*: Theſe *Gentlemen*, indeed, are profeſs'd *Carteſians*, but they are *Philoſophers* and Men of Honour, and have Eſteem for Merit though it be on the contrary ſide; and who hold, that *Liberty of Conſcience* in point of *Philoſophy*, is the unviolable Charter of all honeſt well bred Men: But (*I purſued*) I am highly ſurpriz'd at the buſtle and diſturbance in this Country: There's no *Spaniſh Town* in *Flanders* ſo readily Alarm'd as yours; What is't you ſo much dread?

That which we ſo much dread, *ſaid he*, is, that Implacable *Enemy* of our *Sovereign*, your *Deſcartes*, who when on *Earth*, did all imaginable towards the extirpating the *Peripateticks*, and only deſiſted there, as we are from good Hands inform'd, to come to ruin them in *this Country*. It is now more than thirty years, ſo exact a Guard has been obſerv'd, to prevent a Surprize conſequent to the Advice we have had, that in all this time he hath been forming a Party, and gathering all the Forces poſſible, in order to a Deſcent. This is the Intelligence we have receiv'd from a *Dutch Profeſſor* of *Philoſophy*, who acts here as *Generaliſſimo* in *Ariſtotle*'s Abſence. But *Deſcartes* may come as ſoon as he pleaſes; you ſee we are in a capacity to receive him. Well,

Well, *Monſieur (ſaid I)* if that be all, you may ſleep ſecure; *Monſieur Deſcartes*, I aſſure you, has no Deſign of an Invaſion in his Head; he's a thouſand Times farther off this Place than 'tis from hence to *Earth*; he is thinking of Building a *New World* above the Heavens; he has invited us to ſee the Execution of his Grand Deſign, and thither 'tis we are going: And to convince you of the Truth of what I ſay, 'tis but deputing, when we part, ſome Souls to bear us Company, and they ſhall bring you an account of what they there ſhall ſee.

You rejoyce me mightily, ſaid he, for we Peripateticks are tired with theſe long Fatigues: but take it not ill, that I execute my Orders, and conduct you to the *Governour* of the Place, according to the Cuſtom, That all *Philoſophers* of a different Sect from ours, arriving here, give him an account what Project brought them hither; we have uſed this Courſe but ſince *Deſcartes* has given us theſe Alarms. So we took the Road that led to the Place, convoyed with a Detachment of about fifty Souls, *Academiques* for the moſt part and *Collegians*, who look'd as if they did not wiſh us very well; that Place was only a great Garden that repreſented the *Lyceum* in *Athens*, where *Ariſtotle* uſed to teach his Scholars walking, whence they derived the Name of *Peripateticks*: 'Tis of a great extent and very finely kept, it is cut into abundance of Allies, whereof the four greateſt meet in the middle of the Garden, at a round large Fountain, whereon is raiſed a ſtately Pedeſtal of the moſt delicate Marble I ever ſaw, on which ſtands the Statue of *Alexander the Great*, crowned by *Victory* with Lawrels, trampling under Foot Scepters and Crowns,

Crowns, and Bucklers and broken Arms, and the Treaſures of *Aſia*. Four great Statues, chained to the four Corners repreſent the Principal Nations *Alexander* conquered. I found that Monument ſo like that of the *Place des Victoires*, that I ſhould have believed one had been the Pattern to the other, had not I at the ſame Time made Reflection, that the near Reſemblance of thoſe two Hero's, might eaſily have furniſhed the Minds of both the Undertakers with the ſame Ideas. All the Figures of the Monument, no leſs than the other Statues in ſeveral Parts of the Garden, as thoſe of *Philippus*, *Olympias*, and many other illuſtrious Perſonages, who formerly honoured *Ariſtotle* with their Friendſhip, are of *Silver*, for Silver is very cheap and common in the *Globe of the Moon*; and it is probably for that Reaſon *Chymiſts* who always affect Myſtery in their Words, call that *Metal* by the Name of the *Moon*.

As we were admiring that noble Monument, we were aſtoniſhed to ſee all of a ſudden, four Water-Spouts riſe from the four Angles of the Pedeſtal, the largeſt and the higheſt that ever were; they mounted at leaſt four hundred Poles in heighth, and they were brought from a River behind a neighbouring Mountain that was higher than the Wells of *Domme* in *Auvergn*; over which the Water was carried by the admirable Contrivance of the Old Philoſophy, that in ſuppoſing the Horror of a *Vacuum* in Nature, ſhew'd how with Pumps to fling Water infinitely high, which Secret is unfortunately loſt in our World; for ſince the Time of *Galileus* we can raiſe Water no higher than three or four and thirty Foot. We ſaw theſe Water Spouts on every

every Side, the leaſt of which exceeded the higheſt Trees that encompaſſed the Garden. From the middle of the Garden we obſerved four Halls of different Figure and Architecture, one at the End of each of the four Alleys: We were conducted to the biggeſt of them, which was of exquiſite Beauty and Magnificence, being of Gold, Azure and Precious Stones. On both Sides, in the Intervals of the Windows was your Imboſſed Work of Silver, excellently carved; but that made a Gallimawfry odd and humerous enough; for on one Part on the Right-hand were repreſented the famous Exploits of *Alexander*, the defeat of *Darius* near the City *Arbela*, the Attack of *Porus* his Army, the Paſſage of *Granicus*, and the Taking of the City *Tyre*. On the other were *Triumphs* of *Ariſtotle* over the reſt of the *Philoſophers*, and the Extravagancies of thoſe that went for Wiſemen before his Time.

The firſt on the Left-hand exhibits *Pythagoras*, doctrining his Diſciples, and preſenting them with a ſort of Table-Book, wherein, among others, were written theſe three *Precepts*: Firſt, That they were to *hear* him full *five Years* without ſpeaking a Word to contradict him. Secondly, They muſt lend an attentive Ear, eſpecially in the Night, to the Muſick and Harmony of the *Celeſtial Spheres*, which only Wiſemen are priviledged to underſtand. And, Thirdly, they muſt abſtain from eating *Beans*.

The Second ſhews you *Democritus* laughing with Might and Main, and *Heraclitus* weeping in warm Tears, and a Troop of little Children hooping after them as after two Fools.

In

In the Third we had *Diogenes* the *Cynique*, habited like a Morris-Dancer, mounted upon a Croſs-way-ſtone, at bottom of which lay his *Tub*, expounding to an Auditory much like that of the Singers *du pont neuf*.

In the laſt ſate *Ariſtotle* on an exalted Seat, that looked more like a Throne than a Magiſterial Chair, and at his Feet ſtood all the *Philoſophers* that lived before him, in Admiration, and liſtning to him as an *Oracle*. Before the Throne of *Ariſtotle* were heaped the Books that repreſented the Writings of thoſe ſame *Philoſophers*, his *Predeceſſors*, which one was putting Fire to, to ſacrifice them to the *Goddeſs Wiſdom*, whoſe Head reſembled a Sun, brandiſhing abundance of Rays upon the Face of *Ariſtotle*, and making a Glory round about it.

At the Bottom of the Hall, upon a kind of Altar, ſtands a large Silver Statue of the beautiful *Pythias*, formerly *Ariſtotle's Lady*, for whom his Paſſion was ſo ſtrong, as to Sacrifice unto her.

At the Top of the Hall was a Ceiling, enrich'd with admirable Paintings, lately done, divided likewiſe betwixt *Alexander* and *Ariſtotle*, agreeable to the Emboſſings; for on one Side was the *Hero* receiving a Thunderbolt from the Hand of his pretended Father *Jupiter Ammon*, to fulminate all the Princes of *Aſia*; and on the other the *Philoſopher* receiving another from the Hand of *Minerva*, to thunderclap all the *Chieftains*, of the New Sects of Philoſophy, among which we eaſily knew *M. Deſcartes*; *M. Gaſſendi*, *Father Maignan*, and many others.

As we were taken up with the Curioſity of all theſe different Pieces of Sculpture and Painting, the *Vice-roy* of the Place came in to give us Audience.

dience. Never was Man ſo much ſurprized as my *old Gentleman*, at firſt Sight of the Governour; he had formerly known him in *Holland*, when he there accompanied *M. Deſcartes*: He was called *M. Voetius*, the moſt reſolved *Peripatetique* in the World, and the moſt avowed of all *Deſcartes*'s Enemies; he that moſt diſturbed the Quiet he came to ſeek in *Holland*, and the moſt obſtinately as ſucceſsfully oppoſed his Deſign of gaining a Party there: Whereas that Man acts the greateſt part in the *Hiſtory* of *Carteſianiſm*, of which, at the Entrance of my Relation I engaged to give ſome Particulars when occaſion ſerved; and ſeeing at the Intercourſe of which I ſpeak, we fell upon a Negotiation with him, as to a Project of Peace between the *Peripatetiques* and the *Carteſians*; it will not perhaps be troubleſome and impertinent, briefly to inſert the Difference he had with *M. Deſcartes*, and the Motive that determined him to fix in the *Globe* of the *Moon*.

M. Deſcartes, after he had finiſhed his *Courſe of Philoſophy*, in the *Colledge de la Fleche*, ceaſed not to be a *Philoſopher* thereupon; nay pretends he commenc'd one but from that Time. As he was fully convinced there was far leſs to be gained from the moſt curious of Books and Libraries than from the great Volume of the World, the moſt Compleat and Inſtructive of all others, to ſuch as know how to ſtudy it as they ought; he pitch'd upon Travel. During nine or ten Years he run through moſt Countries; frequented the Court, as alſo the Armies of moſt Foreign Princes: But ſtill as a *Philoſopher*, *i.e.* continually making ſerious Reflections upon the Intellectual and Moral Part of Man, upon the different Cuſtoms of Countries, *Diſſert. de Meth.*

tries, upon the contrary Judgments Men make of the ſelf-ſame things, conformably to the different Notions they have imbibed concerning them, endeavouring always herein to alembeck Truth from Falſhood, and to advantage himſelf equally by the Folly and Wiſdom of other Men; that he might collect a Syſtem of Life, compoſed and regulated by defecated Reaſon, whoſe Happineſs, as far as poſſible, ſhould be independent of the Turns and Wheels of Fortune.

He began to put his Project in Execution, in a certain Place in *Germany*, which he does not name, where he paſſed the Winter, at his Return from the *Coronation* of the Emperor *Ferdinand* III. where cloſeting himſelf whole Days together in his Stove, he recollected in his Mind all the Obſervations he had made, upon the Conduct of Mankind; which he imployed to conſtitute his Rules of Morality, as they are at preſent in his Book, entituled, *Diſſertation de la methode de bien uſer de ſa raiſon.* From whence paſſing to *Metaphyſical Notices*, and thoſe of *Natural Philoſophy*, he laid the Scheme to the moſt part of his Works he ſince hath left us; making at the ſame Time an Eſſay of his Phyſicks, in the Mechanical Explanation of the Motion of the Heart and Arteries, which certainly is not the worſt Piece we have of his Works.

id. Next he deliberated what Place was moſt convenient for a Settlement; he was byaſſed againſt his ſtay in *Britanny*, his Native Country, where his Family then bore, as it does to this Day, a conſiderable Port, foreſeeing the Incumbrances he ſhould find among his Relations, would inevitably retard his vehement Purſuit of *Philoſophy*. In fine, he reſolved on *Holland*, as a Retreat freeſt

freeſt from Diſturbance, where every one, *ſaid he*, minds his own concerns, without medling with other Men's; and where the Maintenance of thoſe numerous Troops, ſerved but to recommend with more Security to the whole Country the Advantages of Peace, in the midſt of a rageing War.

He paſſed near eight Years in Peace and Quiet, making his ordinary abode at *Egmond*, a little Town on the Coaſt of *Holland*, inſomuch that during all that Space he never left the Country, but on the account of his Domeſtick Occaſions, that indiſpenſibly oblig'd him to make ſome Journies into *France*. Happy, if his Zeal for the Publick Good, and his Compaſſion for the Miſerable Condition of Philoſophy, had not made him tranſgreſs that excellent *Moral Maxim* he had preſcribed himſelf, to leave the World as he found it, without endeavouring to reform it, or rectifie its Ideas, to think only of finding Truth for himſelf, and of conquering his own Paſſions; but he was worſted firſt by that of Printing, and after by all the other, Authors are ſubject to, when they find their Opinions contradicted: For it muſt be confeſſed, although *M. Deſcartes* had formed an Idea of a Wiſe-man to himſelf, much like that of the *Stoicks*, yet any one may ſee in reading ſome of his Works, he was not yet arrived to that *Apathy* and *Indolence* which makes their Eſſential Character. *Ibid.* *Ibid. p.* 20

No ſooner had he impreſſed his *Dioptriques*, and his *Meteors*; Next that, his *Diſſertation concerning Method*, and ſince his *Meditations*: But he found himſelf ſet upon from all Hands; all the *Univerſities* of *Holland* took the alarm. Doctor *Revius* for that of *Leyden*, *Voetius* and *Dematius* for *Utrecht*,

Utrecht, *Schook* for that of *Groiningue*, ratified a triple Alliance againſt this upſtart Enemy; who for his Part, before he declared and ſet up his Standard againſt *Ariſtotle*, had made underhand a conſiderable Party. *Revius* having engaged Doctor *Tkill* on his Side, a hot and active Man, undertook the Cenſuring his *Meditations*, throughout his Divinity; and the Affair was carried on ſo far that *M. Deſcartes* Friends adviſed him to interpoſe the Authority of the *Prince of Orange* and the *French Embaſſador*, to put a Stop to its Progreſs: But he ſatisfied himſelf, to proclaim he was injured, and to demand Juſtice of the *Procurators* of *Leyden*, who thought they had done him a ſpecial Favour, in obliging their Doctors Silence, and prohibiting them the mentioning *Deſcartes* and his Opinions in their *Academick* Exerciſes; a Proceedure that was not very Satisfactory to *M. Deſcartes*. He was a little better ſatisfied on the part of the *Univerſity* of *Groiningue*, which at the Solicitation of the *French Embaſſador*, ſeverely check'd *Schooks* Outragious Conduct.

But all this was nothing in compariſon with his great Concernment at *Utrecht*, where *Voetius* fell like a Lion looſe upon him. *Voetius* was one of the Supports of the *Univerſity*; whom the Quality of *Divinity Profeſſor*, as alſo that of *Miniſter* and *Rector*, joyned with his Reverend Grey Heirs rendred awful and venerable to a Town, in which the Corporation of the Univerſity maintained a very conſiderable Grandeur: He had learn'd how to employ theſe Advantages to the gaining abſolute Authority and Command over the Minds of Men, inſomuch that his Sentiments were the Deciſions in the Univerſity and Oracles in

in the Town. 'Tis known what they were in regard of the *New Philoſophy*, which was the Reaſon why thoſe of *Deſcartes*'s Party durſt not declare themſelves: Notwithſtanding, at laſt, *Regius* the Phyſician, whom *Deſcartes* ſtyles, his *Proto-martyr*, could no longer ſtifle the Hatred he had conceived against Subſtantial Forms; he affixed his *Theſes*, wherein he had baniſhed them, to ſubſtitute in their Room the different Configuration of the inſenſible Parts of every Body. This makes a great Noiſe in the *Univerſity*, ſome take one Side ſome another: This is the whole Diſcourſe of the *Town*, News and Politicks are huſh'd, and the Exchange now rings with nothing but *Subſtantial Forms*. *Lett. de Deſc.*

Mean time *Voetius* ſlept not in an Affair of this Importance; he went to the firſt Diſputes of *Regius*, ſuborned a great many Scholars he had gained, and placed them in ſeveral Parts of the Hall; who as ſoon as *Regius* his Diſciple began to talk of *Subtil Matter*, *of the Balls of the Second Element*, *of Ramous and Chamfer'd Particles*, burſt out a Laughing, ſet up an Hiſs, clapt their Hands, and were ſeconded by the *Doctors*, the Friends of *Voetius*: That tumultuous Outcry diſmounted poor *Regius*, and obliged him to cut off his Diſputations. He wrote to *M. Deſcartes*, deſiring Counſel in this Conjuncture, and how he ought to behave himſelf in reſpect of *Voetius*, who had forthwith put up *Theſes* in Defence of *Subſtantial Forms*; and againſt the other Points of the *Carteſian Philoſophy*: He had particularly addreſſed them to the *Faculty* of *Medicine*, and the *Profeſſors of Philoſophy*, imploring their Protection of *Subſtantial Forms* againſt *Regius*. *Tom. 1. des Lett. de Deſc.*

Tom. 1. Let. 89. *M. Deſcartes*'s Advice was, That he ſhould forbear Publick Diſputations, endeavour to draw over *Voetius* to anſwer his *Theſes*, but with all the deference and civility imaginable, to manifeſt a grand Reſpect and Eſteem for his Adverſary, yet ſo as ſtill couragiouſly to maintain the Cauſe of Truth. *Regius* took that Method, not without Fear it might coſt him his Chair; and certainly he ran a great Riſque. *Voetius* undertook him; put young *Voetius* his Son, and *School*, upon writing againſt him: And a little more had cauſed him to be condemned as an *Heretick* by the Divines: He had him before the Magiſtrates; nor had he ſo eſcaped, but upon giving Security for the exact Performance of what they ordered in a Publick Decree, Never to teach *Deſcartes*'s Philoſophy, to hold faſt to the ancient Dogma's and to make no Attaque for the future on *Subſtantial Forms*.

That Blow went with *M. Deſcartes* to the Quick, though he ſeems in his Letter to *Regius* to make ſlight on't, inſomuch that he could not forbear revenging himſelf; venting a *Phamplet* under-hand, called the *Hiſtory of Voetius*; in which he ſcurvily treated him, and ridiculed him ſeverely. That turned the Bent of *Voetius*'s Fury on himſelf, who quitting thenceforward *Regius*, whom he ſaw foiled and groveling, and looked upon as a Forlorn-Hope, ſent out to Piqueer and Skirmiſh, by *Deſcartes*, thought he muſt double his Forces to make an On-ſet on this New Sect, and aſſault it in its Leader. As ill Fortune ſtill would have it, *Deſcartes* and *Regius* fell to Swords-points, and ſharpned their Quills againſt each other, as if it had been the Fate of that *Philoſopher*, at that Time, to have all the Learned

Learned Men of *Holland* for his Enemies, whoſe Names did terminate in *Ius*, *Revius*, *Demmatius*, the two *Voetius*'s and *Regius*.

The firſt thing that was done at *Utrecht*, was to damn *Deſcartes* in all Companies as an Atheiſt, as another *Vaninus*, who under pretence of eſtabliſhing by his Arguments the Exiſtence of a God, aim'd only to rout and confute it. *Voetius* declaim'd eternally againſt him in his Lectures, in his Diſputations, in his Sermons. He pitch'd purpoſely on Theſes of Atheiſm, where he brought in every thing that might bring an Odium on *Deſcartes*. And ſo ſucceſſfully did they decry him, that when the News of his Death arriv'd ſeveral Years after at *Utrecht*, Prejudice was ſo deeply rooted, as to make an addition of dreadful Circumſtances, and it was the Current Report of the Town, That he dyed the moſt impious and wicked Villain in the World, without Faith, without Religion, like *Julian* the *Apoſtate*, caſting up a thouſand Blaſphemies againſt *Jeſus Chriſt*. *Let. de Deſc.* *Creighton Ep. ad Regium.*

Voetius indeavour'd to uncement the moſt intimate Friends he had, and as much a Proteſtant Miniſter as he was, wrote to *Father Merſennus* in *France*, to enter in a League with him, and to excite him to write againſt *Deſcartes*, but ſped not in that Negotiation. He accus'd him of being a Clandeſtine *Enemy* to the *Religion* of the Country, and ſeem'd by that to be willing to impeach him as a *Traytor* to the State. He added, he was an Emiſſary and Spy of the *Jeſuits*, and held an Epiſtolary Correſpondence with them, and produc'd one Letter, eſpecially againſt him, which he had wrote to *Father Dinet*, ſometime after *Confeſſor* to the King. So true it *Tom. 2. des Let. de Deſc.*

is that *Titus Oats* is not the first that thought of perſuading the *Proteſtants* of his Country, the *Jeſuits* gave Commiſſions in *England* to levy an Army, in which they had the Diſpoſal of all places of truſt, and made general Officers, Colonels and Captains.

Hiſt. Conjur. Angleterre.

In ſhort; *Voetius* partly by his Reputation and Vogue, partly by his Intrigues, brought it about, that *Deſcartes*'s Philoſophy ſhould be condemn'd throughout the Univerſity, of which he was Rector: He cited him by the order of the Magiſtrates, with a great noiſe, at the ſound of a Bell, by the notice of a Bedel, to come and anſwer to the Calumnies he was ſaid to have written againſt *Voetius*. In ſo much that his Friends advis'd him to be upon his Guard, as being ſcarce ſecure in the place where he was, though it was out of the Reach and Juriſdiction of *Utrecht*. Two Papers, wherein *M. Deſcartes* mention'd *Voetius*, one of which was the Letter he had wrote to *Father Dinet*, were declared diffamatory Libels. That Declaration was Printed, and affix'd and ſent to the principal Towns of the United Provinces. If we may believe *M. Deſcartes*, there was no leſs Deſign on Foot, than the Baniſhing him all the Provinces by a Decree, the loading him with prodigious Fines, the burning his Books by the Hand of the common Hangman, to which, ſome ſaid, *Voetius* had reſolv'd to make ſo great a Fire in burning of them, as the Flame of it ſhould enlighten all the Countries thereabouts. In a word, *M. Deſcartes* was forc'd to get clear of theſe Troubles, to imploy the credit of his Friends, and the Intereſt of the *French Embaſſador*, that might hinder it from proceeding any farther.

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These Quarrels were kept up many Years; and *M. Descartes* foreseeing the Apologies he he design'd to have presented to the Magistrates of *Leyden* and *Utrecht*, to justifie himself, and demand the reparation of his Honour, would be ineffectual in the procuring such satisfaction as he pretended due to him, thought often of leaving *Holland*, where he found not the Repose he at first propos'd to himself. The Letters he received from the *Court* of *France* at that time, with the promise of a good Pension if he would come and live at *Paris*, determin'd him to depart: But the Troubles of the Kingdom unluckily stop'd the Career of his good Fortune. Letters were sent him in Parchment curiously seal'd, and full of the greatest Praises in the World; But that was all; nor had he his Letters *gratis*. Never Parchment, as he pleasantly says, cost him so dear, and was so unuseful as that: Nothing could hinder him from returning to his beloved *Holland*, without fear of falling afresh into the Hands of *Voetius*, *Schook* and *Revius*: But not long after, the *Queen* of *Sueden* sent for him to *Stockholm*, where 'tis vulgarly said he dy'd.

What I have hitherto said of the difference of *Voetius* with *M. Descartes*, has been taken for the most part out of the Letters of that Philosopher. *Voetius* inform'd us in the *Globe* of the *Moon*, of the other Particulars that concern'd himself, to wit, That after *M. Descartes*'s Departure from *Holland*, he grew reconcil'd to *Regius* the Physitian, who in the Feast of Reconciliation, as a Badge of the real Intentions of his future Friendship, presented him with some of *Descartes*'s *Snush*, which he often made use

of, but especially to come to the *Lyceum* in the *Moon*; that having highly merited of *Aristotle*, by those famous Exploits manag'd against *Regius* and *Descartes*, in the Defence of the *Peripatetick* Philosophy, that *Prince* of *Philosophers* had offer'd him the Imploy we saw him in possession of; that he nevertheless wav'd the accepting of it, till, understanding that *Descartes*'s Soul left no Stone unturn'd to bring the Souls of these Parts over to him, his Zeal for the *Ancient Philosophy* had wrought upon him to quit his Body, in order to oppose the Designs of that dangerous *Enemy*.

This is that very *Voetius* that was formerly the Hero of *Peripateticism* in *Holland*. Our Greeting notwithstanding was extraordinary civil on both Hands; and after our mutual Compliments to each other, he express'd the Joy he had to hear *M. Descartes* was hatching no ill Design upon the *Lyceum of the Moon*. He confess'd likewise the Regret he had for urging that Philosopher heretofore so far: But that his own Reputation in *Holland* was incompatible with *Descartes*'s. That if he had once permitted the *new Philosophy*, to take Footing in the *University of Utrecht*, he must either have been oblig'd to learn it, or hold his Tongue in all Disputes: And he found much uneasiness to consent to one or the other: That he was then too old to become *Descartes*'s Scholar; and that it was easily guess'd how ungrateful a Task it had been for an old *Philosophy Professor*, to hear all his Decisions disputed, without the Privileg of defending them, at least by way of Arguing; for that *Descartes* having thrown out of Doors the Terms made use of in the Schools, he had been

oblig'd

oblig'd in all publick Acts, to ſtand as a Perſon that was Deaf and Dumb: He that had always been renown'd for his Subtilty and Penetration. That he had obſerv'd in his Philoſophy many good Things, among abundance of others that ſeem'd ſomewhat hard. And that having often diſcours'd *Ariſtotle* concerning that Philoſophy, they had both concluded it would not be impoſſible to make ſome Accommodation, and if we were willing, it would be no trouble to him, to enter in a particular Conference thereupon: We gladly embrac'd his Offer, and after having order'd his Attendants to retire, he ſpoke as follows:

You may eaſily ſee, *Gentlemen*, by the Rank I hold there, I have a great ſhare in the Favours of the *Prince* our *Soveraign*: I have yet a greater in his Confidence: You will readily think ſo, by one Profeſſion he has made me, and which I am well aſſur'd I may ſafely venture to make you in his Name. It is this, That his Intereſts are indeed cloſely united with the Intereſts of thoſe Philoſophers that write themſelves *Ariſtotelians*, but at the bottom they are no more the ſame than are their Sentiments in point of Philoſophy: But notwithſtanding he hath hitherto diſpens'd with the Promiſcuous confounding of them. The Pleaſure, and at once the Honour to ſee himſelf Marching at the Head of all the *Philoſophers* in *Europe*, that with an unanimous Conſent attributed to him the Quality of their Prince, was well worth the trouble of conniving at the diametrical Repugnance he ſaw in the reaſoning of moſt of thoſe, who declar'd to be intirely his. That diviſion it ſelf, which was to be found among his moſt zealous *Partiſans*,

who took it to be a greater Honour, and made it of more Concernment to have ingag'd him on their ſide, than Truth it ſelf, did not a little contribute to his Glory: To ſee himſelf independently on Reaſon, by the ſole weight of his Authority made Umpire of all the diſagreeing Philoſophers; to injoy peaceably the Privileg of *Infallibility*, among thoſe that diſputed it with *Pope* and *Councils*, had ſomething charming in it, that induced him to think it beſt to be contented, without being much concern'd at their taking or miſtaking of his meaning; ſeeing, whatever they ſay, he only, by the Voice of both Parties was always in the right. But ſince that *M. Deſcartes*, *M. Gaſſendi*, and ſome others, have thrown off the Yoak of his Authority, and to juſtifie their Conduct have undertook, and with Succeſs enough, to ſhew the Abſurdity, or the unſoundneſs of ſome Opinions of the Schools, of which they pretend to make him the Warantee, becauſe the beſt of his Diſciples have awarded them unto him with an univerſal Conſent: He hath thought fit to declare himſelf on the firſt occaſion, and to intreat the *Publick*, as alſo thoſe *Gentlemen* the *new Philoſophers*, to do him Juſtice in that Particular. He proteſts then to ſeparate his Intereſt in many Articles from theirs, that ſtyle themſelves his Diſciples: He declares that in the *Queſtions* of the *Schools*, many things go under his Name which are none of his; as is for Inſtance, that moſt Childiſh Notion of the *Horror of a Vacuum*. That he himſelf hath certify'd and prov'd by Experience, the Preſſure of the Air, which at this Day is made a Principle in the Phyſical Expilcation of ſuch *Phenomena's*, as have moſt alli-

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ance to the Queſtion of a *Vacuum*. That he is no ways the Father of an infinite little Beings, introduc'd in the School Philoſophy. That his Writings have often been miſ-interpreted, and Men have commonly taken for Natural Beings, what in his *Idea* were only Denominations and Metaphyſical Attributes.

This Calm, *continu'd he*, with which I ſpeak, after that ungovernable Obſtinacy you formerly knew me guilty of, might ſtand for my Credentials, as to you, in *Ariſtotle*'s Abſence: But I will farther add, that ſince you meet him out of the *Globe* of the *Moon*, he hath diſpatch'd an Expreſs, in which he gives orders, that if you paſs'd this way, I ſhould not fail to inform you of his Thoughts and Intentions, and to let you know that whatever Warmth appear'd in him in his Diſcourſe againſt *Deſcartes*, he would notwithſtanding gladly hearken to ſome Accommodation with him: Furthermore this is no unpremeditated Reſolution. The Expedient has been form'd, and written long ago, and the Fault will not be ours if you do not ſee it, and take upon you the preſenting it to *Deſcartes*, if you ſo think convenient. We return'd, we moſt joyfully accepted it, and that we thought our ſelves happy any ways to contribute to the Reconciliation of the *two greateſt Philoſophers* the World has known, and the Reunion of two Parties, that were at preſent the only conſiderable in *Europe*. He took forthwith out of a Cabinet that was at the end of the Hall, and where, upon handſom Shelves, ſtood a good ſight of Books, excellently bound, and that look'd exactly like Books the new Philoſophers have compos'd, within this thirty or forty

Years,

Years, and that *Ariſtotle* and *Voetius* had undoubtedly read; he took, I ſay, from a Cabinet, a kind of *Memoirs*, with this Title in Latin Words, *De Conſenſu Philoſophiæ Veteris & Novæ*. We have, ſaid I, an Ingenious Man of our World, that has wrote a Book with the ſame Inſcription. I my ſelf have read it (*he replyed*) and a Man may eaſily ſee by the way it is wrote in, the Author is well vers'd in all parts of Philoſophy. He is a Gentleman unbiaſſed as to one ſide or other, is throughly acquainted with the Intereſts of each Party, and therefore the fitteſt Perſon that I know to mediate in that Affair. A preliminary Point is taken from his Preface, which is much in the right on't, and whereto *Ariſtotle* and *Deſcartes* muſt forthwith accord; that the Sect-Leaders of Philophy, *Neque omnia, neque nihil viderunt*. With that he preſented us the Project of Accommodation, and deſired us to read it at our leiſure, in our *Voyage*; as alſo to take with us, as we had offered at our Arrival, ſome *Ariſtotelian Souls*, to accompany us to *Deſcartes*'s Place of Reſidence, to the end he might know by them, what that *Philoſopher* had reſolv'd upon the Propoſitions laid down in that Treaty. We thanked him for the Honour he did us, in intruſting us with ſo Important a Negotiation; aſſured him, we would do all that lay in us towards the facilitating its Succeſs; and after much Expreſſion and Acknowledgment of his Civilities, we beg'd his leave we might perſue our *Voyage*, ſince we had a vaſt way ſtill to go, and had ſpent many Hours in that we had paſs'd already. He conducted us out of the *Lyceum*, and giving ſome Inſtructions to two Souls of the

M. Du Hamel.

the Country, that ſeem'd Spirits of Note and Faſhion, ordered them to wait on us, ſo made his *Conge*.

Deſigning to run over that whole *Hemiſphere* of the *Moon* that is oppos'd to *our Earth*, we kept on our Road to the North, and leaving *Democritus* on the left, we paſs'd through *Thales*, and drove on quite to *Zoroaſter*; from whence we made a double towards the Weſt, through deſert Lands, where we ſaw the ruins of ſome ancient Towns, as of *Atlas*, *Cepheus*, *Hermes*, without meeting Man, Woman or Child, till we came to the *Lake of Dreams*, on whoſe Banks we found three ſeparate Spirits, with whom we were taken up one Moment in Diſcourſe, as we paſſed along.

We ſurprized the two firſt, ſtoutly Curſing and Banning their Wives they had formerly in the World. One of which was, that *Hermotimus* mention'd by *Tertullian* and *Pliny*, who leaving his Body abed, to make a Ramble, as his Cuſtom was, his Wife, that did not love him, ſlipt not the opportunity of calling up her Servants, to whom ſhe ſhewed, not without tearing her Hair and playing the Mad-woman, the Body of her Husband unſoul'd and breathleſs, and carried the Humour on ſo well, that the Body was burnt, according to the cuſtom of the Country, before the Soul return'd, who was from thenceforth forced to ſeek another Habitation.

The other Spirit was a *Roman Senator*, whoſe Name was *Lamia*, whoſe Wife had trickt out of the World by the ſame Project, though, a little more it had miſcarried. For as he related it, The Soul being returned to look its Body, where

'twas

'twas left, not finding it, and seeing the Family Mourning, begun to smell how the Matter stood: It Posted presently to the place where was built the Funeral Pile to burn the Body, and arriv'd there, just as the Fire began to seize it. The Soul thought it inconvenient to reunite her self with it, for fear it might be obliged to be burnt alive, she only mov'd its Tongue, so as many of the Standers by heard these Words twice distinctly repeated, *I am not dead, I am not dead.* But seeing the Masters of the Funeral Ceremonies, who had undoubtedly received an *Item* from the Dame, unconcerned as 'ere, she left it to be burnt, and came to fix in the *Globe of the Moon.*

The third, whom we found two Leagues farther in a ghastly Grot, was the famous *John Duns Scotus*, commonly called *Scot*, or the *Subtil Doctor.* He has pass'd for a dead Man unto this day, on which Account some have given out most ridiculous Stories, and highly disadvantagious to the Reputation of so worthy a Person, and which have still been well confuted. But the truth is that he is not dead; and that having by the subtilty of his Mind, found out the Secret so many others have procured, his Corps was taken for dead, and was buried in the absence of his Soul, which took Sanctuary in the *Globe of the Moon.* He was incompass'd by a Croud of little (I know not what you call them, for they were not *Beings*, but I think) *Formalities.* He was the first Father of them in the *Philosophical World*, and he that gave them first Repute. They be the prettyest, littlest, slender,——you'd think them next to *nothing.* Perceiving we were Philosophers, to be a little more

more affable than ordinary, he began to ask us what we thought of an *Universal a parte rei*, and whether we did not take it to be *Objective Precisions?* Our *old Gentleman*, who besides his *Cartesian Ideas* upon Philosophy, had still a Relick of that gruff and surly Humour *Aristotle*'s Compliments had provok'd, answered him in a careless Air, We concern not our Heads much with such insipid Trifles; that it was but *Irish Gibbrish*, and that none of us had any Pretensions to the Elogy *Buchanan* gives his Country Philosphers, otherwise Men of Sense and Worth,

Gens ratione furens & mentem pasta Chimeris.

Trifles and Chimera's, reply'd *Scotus!* They are the finest and most solid Questions in Philosophy. By this it was we distinguished our selves in my time; by that Subtilty wherewith I handled these Questions, I was advanced to the quality of *Doctor Subtilis*. Trifles and Chimeras, quoth a! You *French* Philosophers, have you ever read the History of the *University* of *Paris?* If you have not read it, read it: You will see if these things were look'd on heretofore as Trifles. You will see under the Reign of the young *Lewis*, one *Roussel*in of *Britanny*, at the Head of the *Nominals*, disputing Hand to Fist in the *University* of *Paris*, against those who held an Universal *a parte rei*, and from Arguments they came to Swords, that there was Man-slaughter in the Case. You will see, what I have been told is done, since I quit your World. That in the reign of *Lewis* the *Eleventh*, the Court and Parliament interposed themselves

in

in Philoſophical Differences, which you call *Trifles; that by the order of the King*, the Books of the *Nominals* were chain'd and padlock'd, ſtrictly prohibiting the opening them ever after: And I would to God, thoſe Decrees had not been repeal'd by the Aſſerters of that empty Philoſophy, which will have Univerſality conſiſt in Names and Conceptions: Then at this day I ſhould have reign'd abſolute in the Schools.

But (*continu'd he*) taking Courage, Are not you of that Party of Philoſophers I have heard talk of ſome time ſince, and whoſe Works I have likewiſe ſeen in a Viſit I made *Ariſtotle*, who have a certain *Britiſh Cavilier* for their Leader, called *Deſcartes?* Yea verily, *reply'd our old* Carteſian, and we take it as an Honour ſo to be. Be gone, cry'd he, all in a Rage and Paſſion! Away with you! Hence Hereticks, as you are, who take it for an Honour to be of a Sect, which by its Principles is oblig'd to renounce the Faith of our moſt Holy Myſteries. Your *Deſcartes* holds that a determinate Extenſion is eſſential to a Body, and that a Body being once of the ſize of a Cubical Foot, it would be as great a Contradiction to loſe that Extenſion, as to conceive a Mountain without a Valley. It will be then a Contradiction that the *Body* of the *Saviour* of the World which had the bulk of many Feet, ſhould be comprehended in the ſpace of the leaſt Particle of the Conſecrated Hoſt. Once more be gone Excommunicates: And ſince you will ſtay here in ſpight of me, I abandon the place; and forthwith he march'd off.

That

That his extraordinary Zeal was no leſs ſurprizing than diverting. But that which pleas'd me moſt, was, That upon our leaving that place, the two *Ariſtotelian Souls* which *Voetius* had deputed to accompany us, began by the way to reſume the Argument of *Scotus*, and to urge it vigorouſly againſt *Father Merſennus* and my *old Man*, who were much perplexed to rid their Hands of it. But they propoſed an Argument againſt the manner whereby *M. Deſcartes*, and after him *M. Rohault* undertake to explain the Myſtery of the Euchariſt, without the aſſiſtance of *abſolute Accidents*; which may merit a place in this Relation.

M. Deſcartes in his Anſwer to the fourth Set of Objections, propos'd againſt his Metaphyſical Meditations, explains the Myſtery of the Euchariſt as follows. He ſays, That the Body of *J. C.* after the Conſecration, is in the ſelf-ſame place the Bread was in before; but that it is ſo preciſely in the ſame ſpace, that in what place ſoever, it was true to affirm before the Conſecration, here is Bread; it is true to ſay after the Conſecration, here is the Body of *J. C.* So that if we conceive that before the Conſecration there was, whether in the Surface or in the Subſtance of the Bread, little Piramidal, Cubical or Triangular Spaces, fill'd with Piramidal, Cubical or Triangular Parts of Bread, we muſt conceive, after the Conſecration, thoſe little Spaces are poſſeſſed in the ſame exactneſs by the Body of *J. C.* From whence it follows, according to him, That when 'tis ſaid the Body of *J. C.* is comprehended in the ſame Dimenſions, and the very Superficies as the Bread, by that word Superficies is to be under-

ſtood,

ſtood, not only that external Surface that terminates the total Figure of the Bread, but alſo that which terminates all the parts which are in the depth and ſubſtance of it, ſeparated from one another by the Pores, and little Intervals that are fill'd up with Air, or ſome other Heterogeneous Bodies: In ſo much that ſhould ſome inſenſible parts of the Bread be put in motion by the Air, or ſome other Body, the new Subſtance, that takes the place of thoſe inſenſible Parts, is equally put in Motion.

Upon that Suppoſition *M. Deſcartes* argues thus. Whatever makes an Impreſſion upon our Senſes is only the Superficies of a Body. Every Body therefore that has the ſame Superficies as the Bread, will make the ſame Impreſſions on our Senſes as the Bread. Therefore ſince the Body of *J. C.* is ſo preciſely in the ſame ſpace as the Bread, that it hath the ſame Superficies to an Hair, it muſt inevitably make the ſame Impreſſions on our Senſes as the Bread, that is, it muſt reflect the Light, as the Bread did, and with the ſame Modifications: And from hence we ſee in it the ſame Colour and the ſame Figure. It muſt be preſs'd towards the Centre of the Earth, by the Impulſe of the ſame Matter that preſſed the Bread before, becauſe of the Figuration of its Parts of which it was compoſed; and hence we perceive in it the ſame Gravity. It muſt vibrate the Nerves of our Tongue, and inſinuate it ſelf into the Pores, juſt as did the inſenſible parts of the Bread; and hence we apprehend in it the ſame Taſte, *&c.* From whence he concludes, That Myſtery may be admirably explained, without the incumbrance of abſolute Accidents, which are kept in ſervice without any occaſion for them.

See

See then one Difficulty among many others our *Peripateticks* propoſed againſt that Explication; we will demonſtrate (*ſaid they*) that, granting that *Hypotheſis*, the Bread is not at all changed into the Body of *Jeſus Chriſt* in the *Euchariſt*, but that after the Conſecration, the Bread ſtill remains in the Hoſt.

In order to their Demonſtration they demanded of *Father Merſennus* and *the old Gentleman*: I. Whether by the Principles of *Deſcartes*, the Matter of all Bodies conſidered in it ſelf, and independently of the different Modifications of its Parts was not of the ſame Species? They anſwered, Yes. II. If that which conſtituted the Specific Difference of Bodies was not, according to them, the different Configuration, the different Situation, and the different Motions of the Parts of thoſe Bodies? They acknowledged it. That ſuppoſed, *ſaid they*, we'll evidently prove, That the Subſtance in the Euchariſt, after its Conſecration, is nothing elſe but Bread; for the Matter or the Subſtance, which hath the ſame Configuration of Parts, the ſame Motion, and in a Word, all the ſame Modifications that conſtitute the Eſſence of Bread, is Bread, according to the aforeſaid Principle: But the Subſtance found in the Dimenſions of the Hoſt, after the Conſecration, has all thoſe Modifications; and 'tis only by the Means of thoſe Modifications we conceive it to have the ſame Superficies as the Bread, taking the Word Superficies in the ſame Senſe *Deſcartes* gives it: And 'tis in vertue of thoſe Modifications that that Superficies makes the ſame Impreſſions on our Senſes as the Bread did before the Conſecration: And 'tis from the ſame Reaſon that it reflects its Light preciſely to the ſame

Angles as the Bread: That it receives all the ſame Impulſes, and the ſame Determinations of the Matter, that puſhes it towards the Centre, as the Bread: That it communicates the ſame Vibrations to the Nerves of the Tongue as the Bread: Therefore the Subſtance that is in the Space of the Hoſt, after the Conſecration, according to *Deſcartes*'s Principles, has the Form or the Eſſence of Bread; therefore it is Bread, which was to be demonſtrated. And from thence our Catholick *Peripateticks* concluded, It was not without good Ground that Recourſe was had to *Abſolute Accidents*, in the Explication of that Myſtery.

They made yet one Reflection more upon a Saying *Deſcartes* adjoyns to his Explication, and which ruines his Anſwer. "Notwithſtanding, *ſays he*, "the Body of *Jeſus Chriſt*, to ſpeak "properly, is not there, as in a Place, but Sa-"cramentally. For, ſaid they, What is it, for God's ſake, to be in a Place in proper ſpeaking, but entirely to fill a Space? to hinder the Paſſage of other Bodies that preſent themſelves; to reflect the Light, to be preſſed downward; to have Motion, *&c.* But all this, according to *Deſcartes*, agrees to the Body of *Jeſus Chriſt* in the Sacrament of the Hoſt. And on the contrary, the Notion commonly received of a Sacramental Exiſtence attributes not to a Body in that Capacity all thoſe Properties; for none of thoſe that have ſpoke of the Body of *Jeſus Chriſt* in the Sacrament, have ſuppoſed it was that which reflects the Light, *&c.* Nay, they ſay the quite contrary.

So they concluded, deriding the Vanity of the Applauſe *M. Deſcartes* aſſumes to himſelf in that Place,

Place, upon the Intelligible Manner, wherewith he pretends to have explained that Myſtery, and upon the Obligations he has laid on the *Orthodox Divines*, for having furniſhed them with an Opinion more agreeable with *Divinity* than thoſe uſually received. Applauſe, as well grounded as the Prophecy he made a little after, by which one Day it ſhall come to paſs, that as ſoon as the World ſhall be reclaimed from the *Prejudices* of the *School*, all the Opinions of our Old *Philoſophers* and *Divines* thereupon, ſhall diſappear and vaniſh as Shadows, at the Approach of that Light, wherewith thoſe Glorious Principles of the New Philoſophy ſhall fill the Minds of all ſuch as know how well to uſe them.

For my part, I was of Opinion, upon hearing *Monſieur Deſcartes* ſo refuted, that he had better have ſtuck to his general Anſwer, be it as bad as it will, That he was a *Philoſopher* and not a *Divine*, and that he pretended not to explain the Myſteries of our *Religion* by the Principles of his *Philoſophy*. I was aſtoniſhed too in that Occurrence, That ſuch ſort of Anſwers had the good Luck to meet with no Reply, eſpecially having to do with *M. Arnauld*, who would never willingly take the laſt Blow in Point of Diſputes and Books. But I am perſuaded I have ſince found the Solution of that Difficulty in a Letter *M. Deſcartes* wrote to a *Father of the Oratory*, a *Sorbon Doctor*. He ſays, ſpeaking of *M. Arnauld*, That his only Judgment, as young a Doctor as he was, was of more Weight with him, than that of half the Ancient *Doctors* of the *Sorbon*. Was not a Clearing of that nature able to diſarm the moſt incenſed Adverſary in the World?

During that Diſpute, wherein *Father Merſennus* and the Old Blade thought it unneceſſary to keep to Mood and Figure, and were content to evade the Objection by much raillery upon *Abſolute Accidents*, alledging they ought to be baniſh'd to the Deſert of *Scotus*, to make up his Train and Attendance, with all his little *Formalities*; We croſſed the *Calm Sea*, and turning ſhort to the Right, we paſſed through *Hipparchus*, *Ptolomeus*, and the *Peninſula of the Stars*, and from thence we cut through the *Sea of Clouds*. We entred into the *Demy-Iſland of Dreams*, I mentioned in the beginning; ſo called from the little Manſions in the Globe of the Moon, inhabited for the moſt Part with *Chymiſts*, that are in Purſuit of the *Philoſopher's Stone*, having not been able to find it upon Earth; and a World of *Judicial Aſtrologers*, who ſtill are as great Aſſes as they were in the other World, and ſpend all their Time in making *Almanacks*, and correcting by exact Supputations the falſe *Horoſcopes* they made in their Life-time.

Among others we found *Cardan*, who though he was poſſeſſed of a good Copy-hold Eaſtward, on the Shoar of the *Ocean of Tempeſts*, could not yet forbear making frequent Viſits of his Brethren of the ſame Society. He paſſed away his Time but diſcontentedly, having not yet conquered the Shagrin and Melancholy, occaſioned by that Notable *Horoſcope of* Edward *VI. King of* England, whoſe moſt remarkable Fortunes and Adventures he had foretold, quite to the Fiftieth Year of his Age, who yet had the confounded Luck to die at Fifteen. Two other things, much of the ſame Nature, entertained his Thoughts in that deep Melancholy: The firſt was the Death

Death of his Son, whoſe Horoſcope had proved Faulty, he having not foreſeen what yet came to paſs, That he ſhould be executed at *Milan*, in the four and twentieth Year of his Age, for poyſoning his Wife. The other thing was the uncharitable behaviour of *Scaliger* and *Monſieur de Thou*, in publiſhing in their Books to all Poſterity, That he was ſuffered to dye with Hunger. For after all, *ſaid he to us*, they are Lyars, for were *I dead*, 'twas impoſſible I ſhould be here. I muſt confeſs, that having foretold the Day of my Death, in my Horoſcope, I made my ſelf, and finding I was miſtaken, ſeeing at the Time preſcribed no Sign or Symptom of approaching Death, I ſhut my ſelf in my Cloſet; and not having Confidence to appear from thenceforth in the Sight of Men, ſince every Moment of my Life to come had been the continual Reproach of my Miſtake, I even reſolved to quit my Body, and come and inhabit here. And this, *Gentlemen*, is the real Truth of the Matter. We took occaſion to extenuate the Cauſes of his Affliction, by telling him of the Reputation he always had, with a *non obſtante* to all that, in the World, as an extraordinary Man, and diſtinguiſhed from the Vulgar: After which we took our Leave of him, and poſted from thence to *Merſennus*, where we launched for our Voyage over the Moon. There it was that the two Philoſophers ſtepping aſide for ſome Moments, we read, altogether, the Project of Accommodation betwixt *Ariſtotle* and *M. Deſcartes*, which *Voetius* had given us charge of, and whoſe principal Articles I ſhall here relate. It was divided into two Parts; The firſt was to regulate the Method, how the *Ariſtotelians* and *Carteſians* muſt for the future

demean themſelves towards one another, in their Books, Diſputes and Converſations. The Second, which was very long, contained ſeveral Propoſitions, that the *Ariſtotelians* remitted, to make ſome Advances nearer the *Carteſians*, demanding the like Abatements from the *Carteſians*, whereby they might approach better the *Ariſtotelians*. That Second Part was rather a Confutation of many *Carteſian* Opinions than a Treaty of Accommodation, which gave me to conjecture it would fail of the Succeſs they promiſed to themſelves, or at leaſt pretended to propoſe themſelves. 'Tis eaſie to ſee that *Ariſtotle*, or at leaſt *Voetius* his Secretary was well informed of our Sublunary Occurrences, and what was for and againſt his Party and his Adverſary's.

A Treaty of Accommodation betwixt Ariſtotle, *Prince of Philoſophers, and* M. Deſcartes, *Chief of the New Sect.*

PART I.

THey ſhall not for the future Abuſe or Vilifie each other; that Way being unphiloſophical, and being likewiſe already exploded the Schools, by the Worthieſt and beſt of the Profeſſors.

The

The Ladies and knowing Women muſt no longer treat *Ariſtotle* on their Beſides as a Fop and a Pedant: They ought to know he has been a Soldier, a Man of Courtſhip and Intrigue, who, before he became a Philoſopher, took his Pleaſure and ſpent his Eſtate, that was no little one, being Son of the Chief Phyſician to *Amyntas*, Grandfather of *Alexander*; and perhaps there was never a Philoſopher in the World more a *Courtier* and a *Gentleman* than *he*.

On the other Hand the Old Profeſſors of Philoſophy muſt remember to be more ſparing of their Epithets, of which they are commonly too liberal on *Carteſius* his Account; conſtantly ſtyling him *Enthuſiaſt*, *Madman*, ſometimes *Heretick* and *Atheiſt*. *Voetius* from henceforth voluntarily makes him an Authentick Satisfaction as to all thoſe Points, in default of that which the Procurators of *Leyden* and *Utrecht* denied him, corrupted by the Friends of the aforeſaid *Sieur Voetius*; who is his moſt humble Servant.

Ariſtotle ſhall diſclaim all thoſe Books compoſed againſt *M. Deſcartes*, in an Injurious and Abuſive Way, ſuch as is that Tract entituled, *Deliriorum Carteſii Ventilatio*. At leaſt he ſhall order, That they be corrected, and that in the New Edition Care be taken to retrench ſome Expreſſions a little too ſtrong and biting.

M. Deſcartes alſo, on his part, ſhall give Orders, That in the New Impreſſions of the Works of ſome of his Followers, ſome Prefaces be lopt off, or rather ſome Malicious Satyrs againſt the *School Philoſophers*, not caring to diſtinguiſh them from one another, and throwing unjuſtly upon all, the Faults of ſome Particulars, ſuch as are the Paſſion of Wrangling, Confuſion, Equivocal

Terms, and Ignorance in the most Curtious Parts of Physicks.

It shall be prohibited all the *Cartesians* to give a Character of *Aristotle*'s Merit, before they have read him, especially before they have seen his *Logick*, his *Rhetorick*, his *History of Animals*, and others, where he treats Natural Philosophy in Particulars: And they shall take heed of giving a Judgment on that *Philosopher*'s Parts by his Books *De Physico auditu*, that are not so clear and perspicuous as his others; the Author having his private Reasons for his writing in that manner; which have yet been more confounded in Tract of Time, by a swarm of *Translators* and *Commentators*, who often talk *Greek* in *Latin*, and whereof some understood neither.

Be it prohibited likewise all the *Peripatetick*s to be angry at *Descartes*'s Philosophy before they have throughly examined it, under the Penalty of rendring themselves ridiculous, as some have done, who have placed him in the Catalogue of *Atomists*; that is, of such as fancy Bodies composed of *Atoms* or indivisible Parts; or as another that wrote ingenuously to *M. Descartes* himself, he had plainly seen with his Eyes the *Subtil Matter*, having by the luckiest Accident imaginable observed an abundance of little Bodies playing in the Air, by the Advantage of a Sun-beam, that passed through a chink of one of his Casements.

Lastly, *Aristotle* entreats the *Gentlemen Cartesians*, not to father upon him whatever they find in the Books of his Disciples, without consulting himself; promising on his part, to give no one the Title of *Cartesian* but upon mature Deliberation, especially in regard of certain young *Abbots*,

Abbots, *Cavaliers*, *Proctors* and *Phyſicians*, that call themſelves *Carteſians* in all Companies, for a Pretence to Parts and Ingenuity, which they ſometimes get the Repute of, by that only Confidence of talking at all rates of *Subtle Matter*, *Globules of the Second Element*, *Vortexes*, *Automata's* and *Phenomena's* without underſtanding any thing but Terms.

The Second Part of the Treaty.

WHereas the Article of *Subſtantial Forms* hath occaſioned the greateſt Noiſe and Diviſion between both Parties, as may be ſeen by the Regiſters of the Univerſities of *Utrecht*, *Leyden*, *Groninguen*, *Angers*, and as would be teſtified by thoſe of the Univerſity of *Paris*, *Caen*, and ſeveral others, had Care been taken for the Recording all the Acts and Deliberations held upon that Affair; it is therefore neceſſary both one and the other, each as to their particular, ſhould remit ſomething for Peace and Quietneſs-ſake.

Ariſtotle complained forthwith of the Delicacy of the firſt *Carteſians*, who thought it adviſable to take Diſguſt at the very Name of *Subſtantial Forms*. For ſuppoſe, ſaid he, that no more was meant by that Word than the Principle of the Properties of every Body, and that which is the Cauſe why one Body ſo differs from another, that Uſe has given it a particular Name, and made it a Species diſtinct from other Kinds of Bodies: What hath that Term ſo Diſtaſtful and Extraordinary?

dinary? As to the Idea the *Peripateticks* have affixed to it, making it to ſpeak, an *Incomplete Subſtance diſtinct from Matter*; he ſaid, That Definition being no where to be found in his Writings, at leaſt in expreſs Terms, he might, if he thought good, diſown it, and devolve upon the *Arabian Commentators*, as on the Creators of that *Being*, all the Railleries and fine Things pretended to be ſpoke by the *new Philoſophers* on that Chapter. But that he was not yet in that Humour, the *Carteſians* having concluded nothing rationally againſt that Syſtem. That an *Incomplete Subſtance* was no *Chimera*, ſince the reaſonable Soul in Man is undoubtedly ſo. That their grand *Axiom* brought to demoliſh *Subſtantial material Forms*, viz. Whatever is Material is Matter; was palpably falſe, as they have been anſwered an hundred times, ſeeing Motion and Figure, which are material Things, are notwithſtanding devoid of Matter; and alſo that he lookt upon the ordinary Doctrin of *Subſtantial Forms*, as his true Doctrin. Nevertheleſs, adjoyn'd he, we ſhall ſee what uſe *M. Deſcartes* will make of it, and what Advances he will offer on his part. When he ſhall have granted Brutes a Soul, the Peripateticks will conſider whether they ſhall recede from ſome other Point.

Upon which, he brought many Arguments to perſuade him to be leſs hardy and intractable thereupon. He repreſented how that Article of his Philoſophy had ſhockt the whole World. That his earneſtneſs and zeal for that Opinion had been excuſable, if he had been the firſt Author; but it is well known a Spaniard, called *Pereyra*, firſt lit upon that Notion; and ſome were

were ſo malicious as to ſay, he had drawn it from the Spaniard's Book before he deduc'd it from his own Principles. That he had already gain'd, by that Opinion, as much Honour as could be expected; that it was lookt upon in the World as an Ingenious Paradox, on which he and his Diſciples had deſcanted very ſubtly, and had ſufficiently plagu'd and tormented the School Philoſophers; but that the latter and more intelligent ſort of Men could not forbear Laughing, when they ſeriouſly undertook to maintain it as a Truth. That 'twas known this was the firſt Effect the Preface to a Book, Entituled, *The Soul of Beaſts*, produced in the Mind of its Readers. A Book wrote indeed with a great deal of Wit, but wherein the Author too ſeriouſly drives at the Converſion of the Philoſophers upon that Subject. That no one had brought one ſubſtantial Reaſon to deſtroy the prejudice of all Mankind in that particular. That no one had yet demonſtrated that a middle Being, betwixt Spirit and Matter, was a thing impoſſible. That the Promiſe the *Carteſians* had made, to explain all that we ſee admirable in Beaſts, by the ſole diſpoſition of the *Machine* was whimſical, and not to be relied on, ſince it never had been put in Practice. That when they talked of theſe Matters in general, they ſometimes ſpoke plauſibly enough; but when they deſcended to Particulars, they were either much to be pitied or not endured. That the only Idea of the manner of Brutes acting on infinite occaſions, compared with that Paradox, made it look extravagant. That whereas 'twas anſwered, that Argument prov'd too much, and made for the reaſoning of Beaſts;

L' Ame des Betes.

it

it must be acknowledged that Instance perplex'd the Philosophers, and gave them trouble to get clear off; yet after all, whatever pain it put them to, their Argument lost nothing of its Force; and the Instance on the other hand infinitely increased the difficulty. For if it be hard to comprehend, that Beasts should not have Reason, upon seeing them act in so admirable and methodical a manner, how much more difficult would it be to deny them bare Perception? And lastly, for *Descartes* to give up that point, would not be construed to retract; having himself declar'd, he could not demonstrate, that Beasts had not an apprehensive Soul, no more than it could be demonstrated unto him, they had.

Art. 67. *Tom.* 1.

After that, *Aristotle* passed to another Point, which had some Connexion with the former; which was, *The Essence of the Soul*, made by *M. Descartes* to consist in actual *Thinking*, as he makes the *Essence of a Body* to consist in actual and determinate *Extension*. He tells them, That though he has many Scruples, as to his Method and Manner whereby he offers to demonstrate the distinction of the Soul and Body, and that many People continued dissatisfied a little with the Answers he gave to the Objections of *Gassendus* and *M. Arnauld*; notwithstanding he would not dispute him that Glory of having said something thereon, wholly New and very Ingenious. That he is likewise disposed to follow his Opinion touching the Essence of the Soul, provided he would satisfy him as to one Difficulty taken from Experience.

Many

Many Persons, said he, have made you that Objection: That if the Essence of the Soul consisted in actual Thought, it were impossible she should exist without thinking; and thus it would follow, we should have Thought whilst we were in our Mother's Belly. You will not scruple in the least that Consequence: And as to what's rejoyned by them, that had we constantly Thought, whilst we were in that Capacity, we must necessarily have remembred some one of those Thoughts, at least, that we had there: You answer, The reason of our Non-remembrance, is, because the Memory consists in certain Traces, which being made in the Brain, upon thinking of an Object, are there preserv'd; and that the Brain of Infants is too moist and soft for the preservation of those Traces, at least in such a manner as is requisite to cause remembrance. But you are pressed upon that Answer, for as much as in several places of your Writings, you distinguish Memory into two sorts, whereof one depends upon the Body, and those Tracks or Footsteps impressed upon the Brain; and the other, which is purely intellectual, depends upon the Soul above. You also distinguish Notices into two kinds: The one that depend upon the Organ, and the other Immaterial, that are wholly Independent on it. Now we can easily apprehend that the disposition of the Brain of an Infant, may be in the cause why the Soul recollects not those Thoughts which have their dependence on it; but in regard of the Memory wholly intellectual, those pure Conceptions, those immaterial Notices which are altogether independent on the Organ, and the different Plaits or Impresses of the Brain,

Lett. Tom. 2.

Brain, the humidity of the Brain can be of no Moment, and we muſt undoubtedly remember thoſe Thoughts, and the Motions of the Will that have purſued them. You will ſay, that an Infant in the Mother's Womb is deſtitute of thoſe pure Notices, and of the uſe of the intellectual Memory. But that is the thing I am asking a ſufficient Reaſon for, and of which I ſhould be highly pleas'd to be convinced. In effect *Voetius* had given expreſs Orders to both his *Envoys*, to ſee that *M. Deſcartes* gave a clear Explication of the Point.

Tom. 2. Let. 4. 38.

From the Eſſence of the Soul they proceeded to the Eſſence of the Body. *Ariſtotle* entred on that Article with an acknowledgment of an Error he formerly fell into, advertiſing at the ſame time *M. Deſcartes* to take care to avoid the like Misfortune. I believed, ſaid he, the World was from all Eternity, upon a falſe Principle I ſuffered my ſelf to pre-poſſeſſed with, to wit, That God was a *neceſſary* Being in his *Actions*, as well as in his *Exiſtence*. You have one alſo, of which the ſelf ſame Error is the neceſſary Conſequence: And I am not the firſt that has put you in mind of it. You not only affirm, That the Eſſence of Matter conſiſts in Extenſion, but farther, That *Matter*, *Extenſion* and *Space*, are but three different Names of one and the ſame Thing: From whence, with you, it follows, That wherever we conceive Extenſion and Space, there muſt neceſſarily be Matter. And from thence you conclude, the World is boundleſs and infinite, or, as you chooſe to ſpeak, indefinite in Extenſion. Your Adverſaries of the Terreſtrial World have indeavoured to demonſtrate, That

bottoming on those same Principles, the World and Matter must always have been, and that Matter must necessarily continue always. For as there is Matter at present, where we conceive at present Space and Extension, so by the same Reason there always has been, and ever will be, Matter, where we conceive there ever has been, and ever will be Space and Extension. But we conceive that there always has been, and that there always will be Space and Extension, where the World at present stands. This is a nice Point, and might justifie the Conduct of the *Doctors* and *Magistrates* of *Utrecht* on your Respect. Betwixt our selves (*continu'd he*) the reasoning that bewildered you in that unextricable Maze is a meer Sophism. A *real* Attribute, say you, cannot comport with *nothing*. Now to be extended, is a *real* Attribute, it cannot therefore agree with *nothing*. It agrees notwithstanding with Space, and with what we imagine above the Firmament, and call by the Name of Space. Therefore that which is above the Firmament is real. Therefore that which is in the Indefinite above the Firmament, is Matter. Therefore Matter, Extension and Space, are the self-same thing.

You ought to have apprehended the defect of that Reasoning from two Respects. First, from the Consequence that is taken from thence, concluding for the Eternity of the World, and which voluntarily offers it self to the Mind. Secondly, that supposing it false, as indeed it is, that the World should be Eternal, they'l demonstrate to you by an Argument, exactly like yours, that another Attribute, no less real than that you term so, comports with nothing.

For

For if the World is not Eternal, it is plain a Man may truly ſay, that *nothing* is Eternal; ſince, excepting God, there has *Nothing* been from all Eternity. Now to be Eternal, is methinks, as real an Attribute as to be extended. But as it is a manifeſt Abſurdity to affirm, a real Attribute can accord with *nothing*, it is neceſſary to reconcile it all, that you agree with your Adverſaries, that thoſe Words, *Extended* and *Eternal*, when attributed to *Nothing* and to *Space*, make in our Minds quite contrary Ideas, to what we have upon our attributing them to a *Being* or a *Body*. When we attribute them to a Being or a Body, they ſignifie ſomething *Poſitive*; when we attribute them to Nothing and to Space, they give a *Negative* ſignification. In a Word, when 'tis ſaid, nothing is Eternal, no more is meant, than that there has been no Being created from all Eternity. And when 'tis ſaid, There is only an extended Space beyond the Firmament, it is underſtood there is no Body there, and that there may be one to fill up that Void, and nothing of a Body, which we there conceive. We cannot ſpeak of *Nothing* and of Space, but we muſt ſpeak *Something* of them. We cannot expreſs what we think of them, but by the Terms in uſe: Thoſe Terms are the ſame we imploy to ſpeak of Beings: But if we make Reflection on the Ideas, we ſhall ſee they are wholly different, nor are they ruin'd and deſtroy'd by one another, as is pretended.

This puts me in Mind of a little Inſtance, ſubtil enough upon this Subject, which formerly Dr. *More*, an Engliſh Gentleman, gave you, he

he whose Elogies went so far as to apply to you what *Horace* said of *Homer*; *Qui nil molitur inepte*. He propos'd this Question to you. Suppose that God should destroy the World, and reproduce it a little after, might not it be said there would be, or at least, that we conceive there would be some Interval between the Destruction and Reproduction of the World, although nothing of real interceeded betwixt them both? From whence he proceeded to conclude, That supposing in a Chamber God should annihilate all the Bodies that are between the Walls, there would yet be Length, Breadth and Depth, although at the same time there was nothing real there. He thought to have foil'd you, supposing you would readily have assented to his first Proposition, of which there seem'd no Doubt or Scruple: But I am perswaded he found himself well enough Match'd, when you deny'd him that we could conceive in his *Hypothesis*, any Duration or Interval, between the Destruction and new Production of the World.

The Author of a Letter wrote some years ago to a *Cartesian* Philosopher, afforded the Reader Sport and Diversion enough upon that Point, by several very pretty *Hypotheses* which he offers. But as I am not given to Trifles, and 'tis unbefitting a Philosopher of my Character to be merry, I shall only make use of your own Principles. I'll take that *Hypothesis* that supposes the Air in a Chamber to be destroy'd by God, without any admittance or production of another Body there. That *Hypothesis*, once receiv'd, makes it manifest, That Extension may be conceiv'd without a Body, and by Conse-

quence, that the Eſſence of Matter conſiſts not in Extenſion. You will not admit of this Hypotheſis: But I am going to ſhew, that it implies no Contradiction, by a reaſoning much like one of thoſe you make uſe of in another Caſe, and take for Demonſtration.

For according to you, ſeeing I diſtinctly conceive a thing that thinks, not conceiving Extenſion, and becauſe I diſtinctly conceive Extenſion, not concerning a thing that thinks; I have good Grounds for my Concluſion, that a thing which thinks is diſtinguiſh'd from Extenſion, and that Extenſion is diſtinguiſh'd from a thing that thinks. Thus it is you demonſtrate the diſtinction of the Body and Soul, and thus it is evident, one may exiſt without the other, with a Contradiction; and that from this grand *Maxim*, That the difference of Ideas is the only means we have of knowing the real diſtinction of Things, and their Independence upon one another. Upon that Principle thus I argue. I moſt diſtinctly conceive the Deſtruction or Annihilation of a Body, without conceiving the production of another Body. Therefore it is no Contradiction a Body ſhould be deſtroy'd without another Body's Production. Therefore it is no Contradiction the Air betwixt the four Walls of a Chamber ſhould be deſtroy'd, and yet no other Body produc'd in its room.

Or thus, which turns to the ſame Account. I moſt diſtinctly conceive a part of Matter, ſetting aſide all others, and I moſt diſtinctly conceive all other without that, for Inſtance without conceiving the Air incloſ'd in a Chamber. My *Hypotheſis* then is eſtabliſh'd, as well as the Conſequences that naturally follow, againſt

your

your Opinion, touching the Essence of Matter. So that if you have any Inclination towards a Peace, you will be content to say, that considering Things in their natural Capacity, Matter is necessarily extended; but will willingly give up that Expression that hath disgusted all the World: That Extension, Matter and Space, were all the very same thing.

That Insult which *Aristotle* made upon *M. Descartes*, in bandying one part of his Principles against another, worsted my *old Gentleman's* Patience, and rattled him so, that 'was ten to one but he had tore the Paper on the spot. He propos'd our going off without acquainting *Aristotle's Embassadors*, who were straggled a good way from us, telling us, the Company of such sort of Cattle was not very pleasing: But we represented to him how dishonourable a thing, and unbecoming of *Descartes* that would be. That that Paper was not so much a Project of Peace, as a Challenge and Defiance, *Aristotle* had sent him; that probably he might slight it, and probably he might think it worth while to answer it: That *M. Descartes* had so wonderful a Gift of persuading and captivating Spirits; and the production of a World was a thing of that surprizing Nature, that doubtless the two Souls that bore us Company, must be converted to *Cartesianism*, provided *M. Descartes* would be at the pains of explaining his *System* to them in a plausible and familiar manner. These Reasons settled him again, and we pursued in the reading of the Paper, in expectation of the two Souls.

From the Essence of the Body and Soul, *Aristotle* passed on to their Union, and the Relation they have betwixt themselves. He began with great Encomiums on *M. Descartes* for having opened the Eyes of the Philosophers, and shewing them the Unusefulness as well as Absurdity of their Intentional Species, in many cases, *alledging*, That he had taught nothing on that Occasion, that ought to be held so strange and incomprehensible by the Peripateticks, had not they deserted the Sentiments of their acknowledged Master, to follow the Whimsies and Imaginations of his Commentators. That he himself had remarked in many Places, That the Sense of Feeling was dispersed throughout the Body, and through all the Organs of the other Senses: That Vision, Taste, the Perception of Sounds and Smells were only caused by the local Motion of some Bodies, that touch'd and moved the Organs of the different Senses; that in effect, if that Motion were insufficient for the Soul's perceiving Objects, those intentional Species substituted in their Place, would be as far from serving Turn. That he was not for rejecting *M. Descartes*'s Doctrin concerning the Seat of the Soul in the Pineal Gland, were it proposed only as a pure *Hypothesis*, since all that others say amounts to nothing better; but it was insufferable that System should be urged as a setled and demonstrated Truth. And that the Respect *M. Descartes* still pretended for Truth and Experience ought to make him qualify and moderate his Assertions thereupon.

He intreated him likewise to be more Human and good-natured towards those who taught the Soul was expanded through the Body; and this

is

is what he added to ſhew the *Carteſians* were a little Unreaſonable in that Affair: For, ſaid he, when you aſſert the Soul is placed in the *Pineal Gland*, either you ſuppoſe ſhe takes up all the extent of that Gland, or that ſhe only poſſeſſes one indiviſible part of it; if ſhe poſſeſſes all the Capacity of the Gland, ſhe herſelf muſt thence be extended; for that Conſequence entirely reſembles yours, which you draw againſt the Philoſophers, who make the Soul expanded throughout the Body. If ſhe only poſſeſſes an indiviſible Part thereof, there muſt neceſſarily be ſome part of Matter that is indiviſible, and not extended: And thus in admiting that disjunctive Propoſition, you appropriate to the Soul, what you affirm belongs to Matter only, otherwiſe you grant an Attribute to Matter, which on all other occaſions you deny, and pretend according to your Principles, however we underſtand it, that it is the only peculiar of a Spiritual Soul. Beſides, all the Nerves, where are the Radiations of the Spirits, that enter in and out of the *Pineal Gland*, can neither part from the ſame indiviſible Point of the Gland, nor meet there; ſo that if the Soul was in an indiviſible Point of that Gland, ſhe could not have the Perception of all Objects there. But if you reply, The Soul is not in the Gland as a Body is in another Body, or as a Body is in a Place, but that the Soul in quality of a Spirit is not in that *Gland*, but becauſe ſhe acts there, becauſe ſhe thinks there, wills there and perceives Objects there; and that, ſince the Different Impreſſions of Objects terminate in divers Points of the *Gland*, where ſhe is advertiſed of them, it may be ſaid, the Soul is in all the Gland: The Philoſophers that undertake you,

are ready to take you up with a fresh Objection: For if the Soul acts, wills, thinks, apprehends Objects in all the Gland, that is to say, in a very devisible Space; and if that be sufficient to affirm she is in all the Pineal Gland, it will be true, according to their *Hypothesis* to say, The Soul is in all the Body, since it acts and perceives Objects in all the Body; she sees them in the Eye, as you say, she perceives them in that part of the Pineal Gland, where the Optick Nerve doth point, or the Rays of the Spirits that proceed from that Nerve; she perceives Sounds in the Ear, or as you say, she perceives them in another Point of the Pineal Gland, where the Nerves do center, or the Rays that serve for that Perception.

Thus that pretended Bug-bear of Philosophy, I mean the Presence of the Soul throughout the Body, that causes her to feel in the Hand, when that is prick'd, and makes her move it presently, and withdraw it, upon the Sense of the Compunction, that makes her stir the Foot in order to advance, methinks is no longer monstrous or frightful, nor a Prejudice of Infancy evidently false, seeing that Presence of the Soul throughout the Body is no other than that which is allowed her in the Pineal Gland, the Pineal Gland being extended as well as the whole Body; for the Diminutivensis of the Extension makes nothing to the Purpose: Why therefore should that Vertual Extension of a Spirit be turned to a Jest and Ridicule, when 'tis the same as is admitted by the *Cartesians*, when both are well explained? and undoubtedly all the Sensations may very near be as justly explained upon this *Hypothesis*, as upon that of the Pineal Gland.

From

From all which *Ariſtotle* concluded, That *M. Deſcartes* had better acknowledg with the wiſeſt and leaſt conceited of the Philoſophers, that the Relation the Soul had with the Body in the Perception of Objects, was an incomprehenſible Myſtery to the Mind of Man: That the manner of Objects acting on the Senſes, as alſo how their Action was carried to the Brain, might be very well explained, but that a Bar was put to all farther Progreſs, unleſs a Man would run himſelf into an unintelligible Jargon, or advance Propoſitions dangerous in themſelves, or in the Concluſions that might be deduced from them.

He went on in commending *M. Deſcartes* for his Integrity, manifeſted in his declaring there was nothing in the Idea of a Soul, or a Spirit, that included an Impoſſibility of the Production of Motion by them; and at once he blamed the Inconſiderateneſs of the *Carteſians*, who fool-hardily advanced, That no Creature whatſoever had the Power of producing Motion. It is true, adjoyned he, with a little daſh of Malice, that Paradox, as ill founded as it is, is one of the Principal Pillars of the *Carteſian Syſtem*: For without it how ſhould an equal Quantity of Motion be kept up in the World, where there are ſo many Souls, ſo many Angels, and ſo many Devils, whoſe greateſt Paſtime it is to produce and create Hurly-burlies every Moment? But *M. Deſcartes* is ſo much more Praiſe-worthy for preferring the Intereſts of *Truth* before thoſe of his own *Syſtem*, as dear and beloved as it was. *Lett. de Deſc. Tom. 1, Lett. 69.*

The next Article was upon that grand Paradox of *M. Deſcartes*; That the Eſſences of Things and Truths commonly called neceſſary, *In reſp. ad 5. object. Let. 110. Tom. 1.*

are not independent of God, and that they are only eternal and immutable, because God hath will'd it so: That God is the total and efficient Cause of the Truth of Propositions: That it was equally arbitrary for God to cause that it should be false, that all the Lines drawn from the center to the Circumference should be equal, as to create the World: See then the Abridgment of what *Aristotle* spoke at length upon that Subject.

He said, He did not well understand what was the Sense and Meaning of those Words, *God is the efficient and total Cause of the Truth of Propositions:* For the Truth of a Proposition, since it is not a Being, but a meer Relation of Conformity that it hath with its Object, could not, to speak properly, have an efficient Cause; and if in some Sense it might be said to have an efficient Cause, that could be nothing but the Mind or Tongue of him that Frames and Pronounces the Proposition. Again, he demanded if *M. Descartes* spoke in general of all Necessary Truths, or only of some Particulars. He could not (*continued he*) speak of all: For doubtless he did not believe that God was, or had been able to make these Propositions false, *There is a God*; *God is the free Cause of all Beings*; *God is a necessary Being.* He must therefore only speak of Propositions relating to the Creatures, because according as he expresses himself in one of his Letters, God is the Author of the Essence as well as the Existence of the Creatures: But that he had made a Reflection, That the Truths which respect the Essence of the Creatures have a necessary Connexion with those that appertain to the Essence of God; and that if it was

Ibid.

possible

possible for the one to be false, the other might be so too: As, for example, this, *The Creature essentially depends on God*, is a Proposition belonging to the Essence of the Creature, which if it could be false, that other would fall into the same Circumstance. *God is the absolute Master and free Cause of all Beings*; for neither the one could be true without the other's being so, nor could the one be false unless the other was likewise false: Whereupon *Aristotle* advised *M. Descartes* to have a special Care, lest the profound Respect he affected towards the Omnipotence of God, should not only degenerate into Superstition, but should proceed so far as to bring him to Blasphemous Conclusions.

After that *Aristotle* made a frank and honest Acknowledgment, That *Descartes* had explain'd the Nature of most sensible Qualities in a finer and exacter way than he had done: As of the Hardness of Bodies, of Liquidity, of the Power of the *Elaterium*, of Cold, of Heat, *&c.* And to manifest he had no other Concern than for the Interests of Truth, he retracted, without Ceremony his Position of the Eternity of the World, and *his Sphere of Fire*. But since that Sphere of Fire makes one of the principal Parts of the *Peripatetick* System, and is one of the chief Ornaments of his World, he presumed that *M. Descartes* could do no less than abandon all his *Vortexes* in Exchange, against which he urged many Reasons: But *Voetius* having understood from us that *M. Descartes* was ready to put his World in Execution, and the Design of our Journey was, that we might be Witnesses of that mighty Action, he wrote a Postscript in the Margent, in which he promis'd to submit himself to that

Experience;

Experience; and ſuppoſing it ſhould anſwer the Pretenſions of *M. Deſcartes*, his *Vortexes* ſhould be received, at leaſt as a good *Hypotheſis*, for the explaining the Phenomena of the World, which God hath made. But he farther adjoyned, That in caſe *M. Deſcartes* ſhould fail in his Attempt, he ſhould be oblig'd thus far to condeſcend, That his Phyſicks, which turn for the moſt part upon thoſe Hinges, is an Edifice without Foundation: And that he ſhould reſt contented with the Praiſe common to all the Leaders of a Sect, *viz.* That his Philoſophy had ſomething that was Good and True in it, and that he ſhould avow with the reſt of Mankind, that to *build a World*, and eſtabliſh a Syſtem of Philoſophy, true in all its Principles and Concluſions, was a Point the Mind of Man in its utmoſt Endeavours could never reach.

Laſtly, as to *M. Deſcartes*'s Demonſtrations touching the Exiſtence of God, the Rules of Motion, and ſome other Opinions, for which that Philoſopher had engag'd a greater Zeal and Earneſtneſs, and which required a more through Diſcuſſion: *Ariſtotle* propoſed to him the pitching on ſome Neutral and Unprejudic'd Place, where they might confer together before diſintereſted Arbitratours, to whoſe Determinations they ſhould ſubmit themſelves.

He concluded with a gracious Offer of aſſociating him in the *Empire of Philoſophy*, upon thoſe only Conditions compriz'd in that Project. He admoniſh'd him to fix ſome Bounds to his Ambition, aſſuring him of the Vanity of his Hopes if he purſu'd to carry them any farther; for that his own *Authority* was too well eſtabliſh'd throughout all *Europe*, to be indangered by the

the Enterprizes of a new Comer: That almoſt all Univerſities and Colleges had renew'd the Oath of Allegiance to him, and had made an Offenſive and Defenſive League againſt the New Philoſophy: That ſome Ladies and fine Wits of the great World, that ſeem'd to ſet up for Patrons and Protectors of a new Party in *France*, were not ſuch as much ſtreſs might be laid upon: That a Philoſophical Dreſs of Mind would be as changeable among the *French Ladies*, as the other Modes and Faſhions for the Body: That few were to be found already that valu'd themſelves thereupon: And that 'twas ſaid, ſince the Play of one *Moliere*, the Name of a *Learn'd Woman* was become a kind of an Affront. That though ſeveral Learn'd Men, and many Mathematicians were taken formerly with the new Ideas, there were a very few at preſent, that car'd for the Name of *Carteſians*: Some having preſently deſerted, to take the part of the *Gaſſendiſts*: Others having cut out Syſtems for themſelves, compos'd of what they thought beſt in both the ancient and new Philoſophers: And almoſt all affecting to be *Originals* without tying themſelves to any Seat Ancient or Modern whatſoever. An effect of more pernicious Conſequence than is imagined, of an ill Example which has been given, by the new Schiſm made in Philoſophy.

Scarce had we made an end of reading our Paper, when the two *Paripatericks* re-entred in *Merſennus*, and told us, That from the Weſtern Coaſt they deſcry'd ſomething as an Opaque Body, that they knew not what to make of, ſailing through the Air with wonderful Speed. I'll venture my Life on't, ſays our *old Gentleman*, in

it is some incrusted Star, that tumbles from *Vortex* to *Vortex*, after having lost its own; and is become a Comet. We made towards it with all hast, and the *Cartesian* Conjecture of the good old Man gave us good Diversion, when a few Moments after we perceiv'd it was nothing but a Man mounted on an extreamly black and condens'd Cloud, whose whole Accoutrement look'd exactly like that of a *Magician*, that was either going to or coming from the *Devil's Sabbath*. In effect, *Father Mersennus*, who knew him, inform'd us that he was a *Chinese Mandarin*, the President of the Magicians of his Country, whom he had often met in our *Vortex*, and about a year ago, had had a Conference with him upon the Existence of a God, and that he had prov'd it to him by the Demonstrations of *M. Descartes*, that as resolv'd and case-harden'd an Atheist as he found him, his Demonstrations had stock'd him so as he had promised to examine them at his leisure. He mov'd us to proceed to meet him to learn what was the Success of his Conference, and whether the *Mandarin* was converted. So we advanc'd towards him; but only *Father Mersennus* put on a visible Countenance. They saluted each other, and after some Complements pass'd, *Father Mersennus* demanded, Whether he still doubted of the Existence of a God? He answered, he was throughly convinc'd; and that he own'd himself under a great Obligation to him, for having put him upon the Examination of a Point, of which he was asham'd to have so much as doubted, for want of making some Reflections, with which a most ordinary capacity might have furnish'd him. God be prais'd (*exclaim'd Father* Mersennus) what Joy is here for

for *M. Descartes* when we shall certify him that his Philosophy has convey'd the Knowledg of God to the ends of the Earth! It was certainly with very good Reason he wrote to me upon a time, that he was undetermin'd whether he should publish his Works of Philosophy, but that he thought himself oblig'd in Conscience, not to deprive the *Publick* of five or six Sheets, that contain'd the Demonstrations of the Existence of a God. *Tom. 2. Let. 37.*

Father (*reply'd the Mandarin*) I would not advise you to communicate to *M. Descartes* the Success his Demonstrations had in *China*. They pass'd there for pure *Paralogisms*, at least two of them that are most in his Esteem, and that are drawn from the Idea of a God, and a Being absolutely Perfect. And my Obligation to you consists not in your having communicated to me those Demonstrations, but in that having communicated them, in order to my examining them, it took me in the Head, after having observ'd their weakness, to discuss some other which that Philosopher makes light of in comparison of his own, and which yet are those, I owe my Conviction to. A certain *European Doctor*, by the Name of *Thomas Aquinas*, whose Sums the Jesuits have translated into *Chinese*, which I consulted upon that occasion, and the explication made me by the *Mandarin Verbiest*, who arriv'd in *China* out of *Europe*, some years since, have made a hundred times more Impression on my Mind, than all the *Cartesian* Visions that seem'd extreamly shallow.

That Answer Thunder-struck the poor *Father Mersennus*, who demanded hastily of the *Mandarin* what fault he found with *M. Descartes*'s De-

Demonſtrations? He ſet himſelf preſently to refute them, in ſo much, that we had the pleaſure of ſeeing their Civilities and Complements chang'd into a real Diſpute.

To let you ſee, *ſaid the Mandarin*, that it is not on a groundleſs Suppoſition, I condemn your Demonſtrations for Paralogiſms, you muſt know that after I had heard them from you, I fortun'd to find them in the Hands of a young *Hollander* in *China*, who was upon a Voyage with his Country-Merchants, your *Deſcartes*'s Meditations. Seeing I was already in part acquainted with their Contents, and wiſh'd to be more ſatisfactorily inſtructed, he made me a Preſent of them, and there I read afreſh all thoſe Demonſtrations, all the Objections made him thereupon, and all the Anſwers he returns. The firſt Reflection that I made in general upon my Reading, was, that thoſe Demonſtrations and Anſwers given to the contrary Objections, left me wholly, at leaſt very much, in doubt, and my Mind fluctuating in as great uncertainty as before, concerning the Point that was in Diſpute; and that though I did not ſee forthwith the Faults of them, yet methoughts I ſaw them. Upon that I preſented them to two of my Friends, of the *Tribunal* of *Mathematicks*, conſtituted of able Men, that are accuſtom'd to a *Geometrical* Method, eſpecially ſince the European Mathematicians arriv'd in *China*. After they had run them over, one of the two aſſur'd me, without deciding any thing, that if thoſe Demonſtrations were true Demonſtrations, they were admirable, ſince they were extreamly plain and ſimple: The other adjoyn'd, that that Simplicity it ſelf rendred them ſuſpicious, for

for as much as, ſaid he, the more ſimple they are, the more they ought to have of the ordinary Effect of Demonſtration, on the Minds of thoſe they are propos'd to. Now I am inſenſible of that Effect: My Mind finds not the evidence ſo ſtrong as to be carry'd away with it: On the contrary, I perceive, I know not what Doubts and Scruples, that ſtand in the way of my Aſſent, and that induce it to believe thoſe Reaſonings are falſe. And I remark, added he, that all, as well Friends as Enemies, of that Philoſopher, that have wrote their Opinion of his Demonſtrations, have made the ſame Reflection, and Experimented the ſame thing, as I my ſelf. We ſet our ſelves therefore to a ſerious Examination of them, and began with that which *M. Deſcartes* propoſes firſt of all in the Geometrical Abridgment of his Meditation.

An Attribute which we ſee diſtinctly contain'd in the Idea of a thing may be truly affirm'd of that thing. But in the Idea of God, that is to ſay, in the Idea of a Being abſolutely perfect, I diſtinctly perceive neceſſary Exiſtence is contain'd; ſince neceſſary Exiſtence is a Perfection, and a Being infinitely perfect, comprehends all ſorts of Perfections. Therefore I can affirm Exiſtence of a Being abſolutely perfect, and ſay with Truth and the greateſt Aſſurance, that God exiſts.

Upon a ſecond reading of that *Demonſtration* and Examination of each particular Propoſition of it, whatever appearance of Truth they ſeem'd to carry with them, all our Scruples began to grow in us afreſh. We apply'd our ſelves to the finding out the Cauſe: We examin'd our ſelves, according to the Council of the *Author* of

of the *Demonſtration*: And we deſcended into our own Breaſt, to ſee if we had not hoarded up ſome Prejudices that might block out thoſe Propoſitions, whoſe Evidence, we thought, deſerv'd admittance. We found none at all there, having been to that Inſtant very indifferent as to the truth of that Concluſion; and ſuppoſing the Ballance was not in an exact Equilibrium, we certainly inclin'd towards the ſide of the Exiſtence of a God, rather than the other. So that the Prejudice which favoured that Exiſtence, was more to be fear'd on our Account, than on the contrary. Moreover we were conſcious to our ſelves, we were not concern'd at the reputation of *Deſcartes*, and that we were untouch'd with Envy, with which he ſeems to ſuſpect ſome of his Country-Men tainted, who had declar'd againſt his Demonſtrations. That incourag'd us to believe, our Scruples proceeded from the Demonſtration it ſelf, which by Conſequence, muſt only carry a ſeeming Evidence; ſince a real and true Evidence of a Demonſtration or a Propoſition, is neceſſarily accompanied with a ſatisfaction and tranquillity of Mind, that perceives it ſelf enlightned in ſo lively a manner, as makes it impoſſible to doubt or withſtand the Truth. Hence it is that maugre the Wranglings of thoſe *Deſcartes* calls *Sepricks*, it is impoſſible to have any Scruple concerning *firſt Principles*, any ways to doubt, if the Whole be bigger than its Part; and whether it is impoſſible that the ſame Thing ſhould be, and not be at the ſame time. Reflecting therefore upon that Argumentation, we ſuppos'd it muſt needs ſeem evident, and at the ſame time we experienc'd from within our ſelves,

ſelves, that nothing was leſs really ſo. All the Difficulty was to diſcover the Spring of that falſe Light, and to find out what it was that dazled, inſtead of cleaning our Perſpectives. We preſum'd we might be underſtood, and our meaning thereupon be clearly explain'd by theſe Reflections.

The *Axiom* that makes the firſt Propoſition in *Deſcartes*'s Reaſoning, is true but upon the Suppoſition of two Things. Firſt, that the *Idea* of which he ſpeaks be a real one, that is, ſuch a one as repreſents a real, at leaſt a poſſible Object. Secondly, that the Mind, which forms that Idea, be clearly convinc'd that it is real. Thus becauſe the Idea of a right-lin'd Triangle is real, and a Geometrician acknowledges it as ſuch, perceiving diſtinctly the equality of the three Angles with two Rights, upon that Idea he may truly affirm of that Triangle, that it has three Angles equal to two Rights.

But if the Idea is not real, or if I am not evidently aſſured it is ſo, it is falſe that I can affirm a real Attribute of it, which I diſtinctly perceive in it. Take for Inſtance, that imaginary Idea of *A Mountain without a Valley*, in as much as it repreſents a Mountain to me, I have an Idea of an Height; yet I can truly and abſolutely affirm, that a Mountain without a Valley is high.

If the Idea is real, and yet is not evident to me that it is ſo, it is true that the Attribute I diſtinctly apprehend in it, agrees to the thing it repreſents: But it is falſe that I can affirm that Attribute of the thing in Hand, or that I can demonſtrate to my ſelf that property from that Idea. As ſuppoſing this Idea was a real one,

A Horſe that has Perception and Senſe: Deſcartes that thought it was not real, could not conclude from thence, That an Horſe was capable of Pain and Pleaſure; although that property is diſtinctly contain'd in the Idea of a Being furniſh'd with Senſe and Apprehenſion.

That once ſuppos'd to the end, I may demonſtrate the Exiſtence of God, by that ſole Idea (*A Being abſolutely perfect*) it is not only requiſite it ſhould be a real Idea, as it certainly is, but that it be evident to me, abſtractedly from all the uſual Demonſtrations, that that Idea is a real one, that is, that it repreſents to me a real Object, at leaſt a poſſible one, and no *Chimera*. Now I maintain, before *Deſcartes*, that Idea is not evidently real, before the ordinary Demonſtrations: For if it be evidently real, it is either ſo of its ſelf, or from the Diſquiſition I make of the Ideas it is compos'd of. It is not ſo of it ſelf: For if that Idea were manifeſt of it ſelf, our Mind could never make a Problem of it, nor demand ſeriouſly of it ſelf before the Demonſtration; Is a Being infinitely perfect, a real Being, or an Imaginary one? No more than it could make a Queſtion of theſe, Is the Whole bigger than its Part? Can a Thing be and not be at the ſame time? Since they are manifeſtly real of themſelves. But our Mind before Demonſtration, can make it ſelf this Demand, whether a Being abſolutely perfect, is really a Being, or in Phancy only? And a Man that never had reflected on the things that prove the Exiſtence of a God, would not be in the leaſt ſurpriz'd, to hear that Queſtion ſeriouſly propos'd, as he would be, ſhould any one ask, as if he were in Doubt, whether the Whole

Whole is bigger than its Part. That Idea then is not manifestly real of it self. It remains then that the Evidence of its reality must be fetch'd from the Examination that we make thereon. If so, *M. Descartes* ought to have minded us of that Precaution, before we entred on his *Demonstration*. But I prove that antecedently to Demonstration, the reality of that Idea can neither be evident to us of it self, nor by the discussion of the Terms contain'd in't. First, because the Attribute is not comprehended in the Idea of the Subject: Since it is not essential to a *Being* to be absolutely perfect. Secondly, because that Discussion affords me many seeming Contradictions, which my Mind knows not how to reconcile before the ordinary Demonstrations. For to examine and unravel that Idea, which of its self is very general and confus'd, is to retail all Perfections, whereof not one must be wanting to a *Being* absolutely perfect. Now among those Perfections, there are some that blunt and repulse the Mind, because she has not so great a reach as to conceive them. For Instance, that that *Being* should be of it self, that that Being should be Almighty and Independent of every thing in its acting, even to the Power of producing *Beings* out of *Nothing*. There are others that seem to her inconsistent in the same Subject. For instance, she conceives Liberty and Immutability, Immensity and Indivisibility, the Properties of Bodies and of Spirits, as so many Perfections. She sees that the Perfections which agree to several Beings separately, must all be united in that absolutely perfect Being. Conceiving therefore a Being absolutely perfect, she represents it at once as a free Being, and an

Immutable, as one that can desire and be averse to the same thing, though its Will be always Unchangeable, that is, Omnipresent, without being extended or divisible, that is, a pure *Spirit*, and at the same time includes all the Perfections of *Bodies* possible to be produc'd.

Nay I dare presume to say, that this Idea thus analyz'd, in respect of a Mind, that never made any Reflection on the Reasons that conclude the Existence of a necessary Being, discovering so many Contradictions in that necessary Being, would as soon represent it as an Imaginary Being, as a real one, and that, not supposing those usual Reasons, that prove to us a first cause of all Beings, and the Reflections that follow them, we should as easily regard that Being as impossible as possible. From whence I at least conclude, that the *Idea of a Being absolutely perfect*, cannot be look'd on as an Idea undoubtedly real, by him that examins it, before his Acquaintance with the ordinary Demonstrations. Consequently, that he that examins it cannot absolutely attribute Existence to that Being, and which is the same thing, cannot demonstrate to himself the Existence of a God, from the Idea of a Being infinitely perfect.

The defect therefore of *Descartes*'s *Paralogism*, consists in this, that he supposes, before any Demonstrations, the Idea of a Being absolutely perfect, to be taken by the Mind for real, and as having a real Object, which is palpably false.

All this discovers the Original of the Scruples all the World have had, as to that Demonstration, and which those themselves have not been clear of, whom the difficulty of resolving so

ſo ſubtil a *Paralogiſm* hath drawn over to *Deſcartes*'s Party, who doubtleſs had they been honeſt and ſincere, muſt have confeſs'd they ſtill felt ſome diſquiet in their Mind on that Particular; and that it was by meer Violence they had at laſt accuſtom'd their Underſtanding to tell them, that Demonſtration was evident. This was the Fault which ſome felt, rather than ſaw, that made them deny Exiſtence to be inclos'd in the Idea of a Being infinitely perfect. For abſolutely ſpeaking, although it is compriz'd in the Catalogue of Perfections, appropriate to that Being, yet the Mind to which the Idea was not manifeſtly real, took it not in, and excluded it, in making that very Problem, *Does a Being abſolutely perfect Exiſt?* Until the Arguments independent of that Idea had reſolv'd the Problem, and convinc'd it that ſuch a Being did Exiſt.

And let not *Deſcartes* ſay, that that *Idea* including nothing but *Perfections*, it is evident it includes nothing but what is *Real*; for a *Chimerous Idea* may be compos'd of only *Real Ideas*; here then is one exactly like that we are in diſpute of, *A Triangle that hath all the Perfections of Triangles.* That Idea, though it includes nothing beſides real Perfections, is notwithſtanding a *Chimera*, ſince for Inſtance a *rectangled Triangle* has oppoſite Properties to thoſe of an *Equilateral*, and that Oppoſition is the reaſon they are inconſiſtent with one another. So, though all the Perfections of Beings are real, it does not follow that that Idea, *A Being that hath all the Perfections of Beings*, ſhould be a real Idea; and the Oppoſition I obſerve betwixt ſome of thoſe Perfections, naturally influences my Mind,

unleſs prevented by the ordinary Demonſtrations, to doubt, at leaſt, whether that Idea is not a Chimera, as well as the other I have been ſpeaking of. From hence it is that in purſuance to the Demonſtrations that convince me of the Exiſtence of that Being, but that give me no clear and diſtinct Knowledg of its Eſſence, I confine my ſelf to ſay, That Being muſt contain the Perfections of all other Beings eminently, that is to ſay, in a way I don't conceive, and which would never have come into my Head, or at leaſt would never have been look'd on by me as certainly and evidently poſſible, unleſs I had been convinc'd of the Exiſtence of the firſt Being, before the diſcuſſion of its Eſſence.

That Solution of *Deſcartes*'s firſt Paralogiſm, made way to the diſcovery of that other Default of his, where he concludes the Exiſtence of God from the *objective reality of the Idea* (as he ſpeaks) which we have of God. That Idea, (ſays he) which I find in my Mind, has an infinite objective reality, ſince it repreſents to me an infinite Being. Therefore it has that infinite Being for its cauſe; therefore an infinite Being exiſts: For otherwiſe the Effect would have Perfections, that were not in its cauſe.

Thoſe who have undertook that arguing, give us to underſtand, they have found it to be a greater Paralogiſm than the former, and bring many Reaſons for it, which *M. Deſcartes* refutes as well as he is able: For my own Part, my Opinion is, That *M. Deſcartes* ſuppoſes in that Reaſoning, what lay on him to be proved: For he not only ſuppoſes that that Idea has an objective reality, but farther, that I

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can be ascertained independently of the common Demonstrations, that it effectively has an objective Reality, or that it has a Real and not an imaginary Object: But I am incapable of knowing whether its Object be real or imaginary, before the Demonstrations, as I have already proved: And if I can doubt whether that Object is not a *Chimera*, I cannot suppose it has an *Objective Reality*, but ought to fear it has an *Objective Vanity*, if I may be allowed so to speak; and in that Case I can by no means conclude, That God has impressed it on my Mind, and consequently that there is a God: But I ought to think, That probably it proceeds from *nothing*, as *Descartes* expresses himself; That is, from an Imperfection of Mind that hath produced it, as it could produce this same a *Mountain without a Valley*. Hence it is clear and manifest, that those two pretended Demonstrations are meer Paralogisms, and that both are maimed and lame in the same part, and defective on the same account.

Besides, *M. Descartes* can never demonstrate to me the Truth of the Proposition, on which all his reasoning depends; *viz.* That the Cause of an Idea ought to contain formally or eminently all the Perfections which the *Idea* represents; for when 'tis said, The Cause contains all the Perfections of the effect, that is not meant, nor is it evidently true, of such Perfections as the effect possesses, and not of those it only represents; for the Perfections the *Idea* represents, are not the Perfections of the *Idea*, the only Perfection of the *Idea* being to represent all those Perfections: A Quality that hath nothing of

Infinite in it, and consequently supposes not an infinite Cause.

I say that Quality includes nothing of Infinity, because the Perfection of an Idea is not measured by the Dignity of the Object that it represents, but by the manner wherewith it represents it; which being most imperfect in the Case before us, cannot be infinite. And this single Instance which I subjoyn to all that *Descartes's* Adversaries have said upon the Matter, is sufficient to shew, That the Proposition on which is grounded his whose Reasoning, will not pass for a Principle of a Demonstration.

Lastly, continued the *Chinese*, Supposing the Reasonings of that *Philosopher* were not false or *sophistical*, they would scarce merit the Name of *Demonstrations* in the Subject they proceed upon: There never can be Demonstrations of the Existence of a God, whilst they are not received as such, that is, whilst they are not received as convincing Arguments beyond reply, the Truth of which is so prevalent as to destroy all contrary Prejudice. Now *dark* and *clouded* Minds can never be pierc'd by that *Metaphysical Subtilty*: Those of a *middle Rank* find themselves perplex'd, whether by their Prejudices, or for want of Penetration; most of those of the *first* and most *exalted* Order, discover in them, or think they do discover very knotty Difficulties. All this put together makes one general Prejudice on their Consideration, that never read them, and which might warrant their Prudence to conclude, if there were no other Demonstrations of the Existence of God, there were certainly none at all. So that my Advice to your

Philosopher

Philoſopher and his Followers is, Not ſo highly to prefer his *Demonſtrations* before thoſe *commonly* made uſe of: For if it be true that all others are inevident in compariſon of theſe, very miſchievus Conſequences might be drawn from that Principle, againſt the Exiſtence of a Firſt Being, of which the *Libertines* (if I may judge by thoſe of the *Empire of China*) would not fail to make advantage

Whether the Spirit that drove on the Cloud, on which the *Mandarin* was horſed, and which was one of the grimmeſt and blackeſt *Devils* in all *Hell*, grew ſowr'd and uneaſie at theſe Diſcourſes, from which Inferences might be drawn very prejudicial to the Intereſts of the *Sabbath*, or whether the *Mandarin* was himſelf in haſte, and expected to hear nothing new upon that Affair, he had no ſooner uttered that laſt Sentence, but we ſaw him on a ſudden hurried towards the Eaſt with an incredible Swiftneſs.

Father Merſennus, that ſtood on Thorns to give him Anſwer, could not forbear following him, and kept him Pace for above thirty Degrees. He returned to us about a quarter of an Hour after, and ſpoke a little angrily. It is ſtrange how the Enemies of *Deſcartes* make their Inſults, and treacherouſly fall upon us, then betake them to their Heels, without giving us ſo much as Time to put our ſelves in a Poſture of Defence, and to reply to that noiſy Trumpery which they think to put off at the rate of Oracles: If the *Mandarin*, no leſs than *Ariſtotle* had rely'd upon their Forces, and believed, as they pretend, their Arguments a Match for *Deſcartes*, they would not have ſhrunk when they were to grapple, and would at leaſt have tarried the Anſwer that was to be made them; but theſe

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are *Donquixots* of *Knight Errants*, that bravado it by discharging a Pistol in the Air, and never stand to it before the Enemy, which they make as if they did encounter. But in the Time that I have accompanied our *Mandarin*, I have overturned his *Ideas*: He has promised me that this Day twelvemonth he will be again in *Mersennus*, where we shall have a fair and leisurely Conference upon *Descartes*'s *Demonstrations*; then, *Gentlemen*, I desire your Company, *said he*, and if I do not convince my *Gentleman*, so as to stop his Mouth for the future, I'll commence *Peripatetick* on the Spot, and utterly renounce *Cartesianism*. We promised him to wait on him at that Time: But, Father, *said I*, we have been long upon the Road, yet have made no great Progress in our Journey, I desire we may dispatch it as soon as possible, for I am in fear for my Body, and would not for a World it should stay without me above four and twenty Hours. With that he looked towards the Earth, to see what Hour it was, and told me, it was but seven Hours since we left *France*, and provided we made no Halts in our way, in five Hours, at latest, we shall arrive in *Descartes*'s *World*.

So we left *Mersennus*, and departed from the *Moon*, by the Northside of that *Globe*; we made towards the *Starry Heaven* with all the Speed we were capable of; that is to say, in one Minute we compass'd many thousand Leagues. It is a prodigious, and inconceivable thing, the multitude of the Stars; a Man can discover from the Earth, with the best Glasses, but a very inconsiderable Part, in respect of those that lie out of Sight. We cross'd the Sign *Sagittary*, where I took pleasure in observing the principal Stars, that

that are usually describ'd on the Celestial Globes; that *Sign* resembles an *Archer* near as much as *I* resemble an *House*; whereof you may imagine my two Eyes the Windows, my two Arms the Jettings that flank the Main of the Lodgings, represented by the rest of my Body.

Had I a mind to divert my self, as *Ovid* does, in his Description of the Chariot of *Phaeton*, I might make a thousand pretty Astronomical Allusions, and could create in my Road many new *Zodiacks*, in which a multitude of Animals celebrated in the Fables that some have left behind them upon Earth, might take place, and have Reparation made for the Wrongs done them by the capriciousness of *Poets* and *Astronomers*, that have given the Preheminence to others of perhaps not half so great Worth and Magnitude: But the Reader may easily imagine to himself all that. I shall say no more of the Conferences we had in the rest of our *Voyage*, where I was little more than *Auditor*. The two *Peripateticks* held a Dispute almost all the way with *Father Mersennus* and the *old Gentleman*, upon several Points of the *New Philosophy*, but all they said amounted to little more than may be seen in *Father de la Grange* and other Books, that treat of such sort of Things. It pleased me to see with what Heat each maintain'd his Party, and endeavour'd to draw me over to it; but I was satisfy'd in praising first one and then the other, without giving up my self to either, and only took upon me the Quality of Arbitrator, (which they seemed by common Consent to award me) for the moderating the too great Vehemence and Zeal for the Sect that sometimes transported them a little farther than

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was allowable. Mean while I took notice, That *Father Merſennus*, that conducted us, made us ſtill leave, from Time to Time, the direct Road, to fetch a Compaſs about, and aim'd to keep us at a Diſtance from the Body of the Stars, or, to ſpeak in the *Carteſian* Phraſe, from the *Centre* of the *Vortexes*. I demanded the reaſon of his doing ſo; telling him, one of my greateſt Curioſities would be to contemplate a Star at hand, and to conſider the Motion of the ſubtil Matter in the Centre of the *Vortex*, and that, that was the readieſt way to convince me there were *Vortexes*, ſuch as *Deſcartes* has deſcrib'd. He anſwered, it would be more convenient to ſatisfie my Curioſity as I returned, after that *M. Deſcartes* had himſelf explained the different Determinations, the Subtil Matter is capable of, in a *Vortex*; that thereby I ſhould better take his Meaning, and before that it would be but a new Subject of Confuſion to my ſelf, and of cavilling to the *Peripatetick Gentlemen*. It behoved him to hold to that, and I had from thence forward but a very ill Opinion of the *Vortexes*, of which I ſaw no likelihood in the Motions of the Matter at a good Remove from the Stars. But at laſt we arrived to the *Third Heaven*, which was the End of our *Voyage*. The Occurrences that happened in my Stay there, ſhall be the Subject of the Third Part of my *Relation*.

A VOYAGE TO The World of Cartelius.

PART III.

THE *Third Heaven* of the *World of Deſcartes*, is the ſame with what the Philoſophers heretofore called the *Imaginary Spaces*; but ſeeing the Word *Imaginary* ſeemed to import nothing but what was *Chimerical*, and in the Imagination only he choſe rather to term it the *Indefinite Spaces*. There have not been wanting ſome that have ſtarted Difficulties upon the Term *Indefinite*, which in ſeveral Places he ſeems to ſubſtitute in the Place of *Infinite*, without any Neceſſity; but at laſt his Diſciples have made it *a-la-mode*, and Cuſtom hath warranted its Uſe.

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As ſoon as I ſet Footing in thoſe vaſt Regions, I deſcry'd indeed the fineſt and moſt advantagious Place poſſible to be imagin'd for the Building of a *World* in, nay for the Conſtruction of *Millions* and *Infinite Worlds*, but I ſaw no Materials proper to begin, or to make the leaſt Part of ſo great an Edifice.

Having travell'd ſix or ſeven thouſand Leagues without any News or Tidings of *Deſcartes*, we agreed to ſeparate our ſelves, that we might find him out the eaſier: *Father Merſennus* took one way, the Old Gentleman and I, with the two *Peripatetick* Souls the other. In ſhort, *Father Merſennus* found him, and quickly after we had parted, we ſaw them both together, making towards us. The obliging way wherewith he receiv'd me, certified me, That *Father Merſennus* had given him a good Character of me, and ſpoke of me as a Man that in Time would prove one of his moſt zealous Followers. He likewiſe very reſpectfully ſaluted the two *Peripateticks*, but gave them to underſtand the Pains they had taken, in coming to treat of an Accommodation with him, were manifeſtly to very little purpoſe: That *Father Merſennus* had already ſufficiently advis'd him of the Propoſitions they deſign'd to offer, which he aſſured them he ſhould not be very forward to condeſcend to; notwithſtanding he would give them a favourable Audience, and ſatisfie them beforehand he had no ill Deſign upon the *Kingdom of Ariſtotle*; thereupon, giving Orders to *Father Merſennus* to entertain the *two Gentlemen*, he accoſted the *Old Sage* and my ſelf in particular.

The Diſcourſe began with the ample Proteſtations of Friendſhip, *M. Deſcartes* and the *Old Stager* made

made each other, mutually expreſſing the Joy they had in ſeeing one another: The *Old Gentleman*, out of hand took upon him to make my Elogy, ſpeaking a thouſand fine obliging things of me to *Deſcartes*; eſpecially he cry'd up the unintereſted Love I had for Truth, the Deſire of Learning that always had appear'd in me, and the Readineſs I had promis'd, to imbrace the Inſtructions, in the Inqueſt of which I had made ſo long a *Voyage*. I wav'd, as modeſtly as poſſible the other Praiſes that were given me; but added, That for the Love of Truth and Deſire of Learning, I muſt ſtand up, as for my only conſiderable Accompliſhments; that as to the Readineſs I had ingag'd to receive *M. Deſcartes*'s Inſtructions, that ought not to come into the Account, ſince a Maſter of his Character and Worth, and a *Genius* ſo Admirable and Tranſcendent beyond all others, as his was, had Right to demand and require that entire Submiſſion from all that pretended to Wiſdom or Equity in the World.

You are pleas'd to carry your Compliment a little too high, *reply'd* M. Deſcartes, and I queſtion whether the generality of thoſe that are reputed the *Wiſe* and *Equitable* Perſons of the World, would ſubſcribe to that Homage and Submiſſion you their Repreſentative vouch for them: I queſtion too, according to the Rules of *Phyſionomy* of Spirits, whether I ought to build much upon that pretended Tractableneſs, wherein you pride your ſelf ſo much; methinks I perceive ſtill at bottom of your Soul ſome kind of, I know not what, Prejudices, that indiſpoſe it for the Knowledg of Truth. Tell me, in beholding this vaſt *Space*, (*continued he*) what

is't

is't you think you ſee? Monſieur, (*I reply'd*) that is a perplexing Queſtion, but to convince you that I ſpeak from my Heart, in promiſing to be inſtructive, I will make Anſwer to your Queſtion juſt as my Thoughts are of it: According to you I ought to ſay, That beholding the great *Space*, I ſee a *Body* or *Matter*; but without Diſſimulation, methinks, in effect I ſee juſt *Nothing*.

At that my *Old Sophiſter* tipt the Wink upon me, which I took not at that inſtant, nor underſtood the Meaning of it till after. 'Tis enough, ſays *M. Deſcartes*, let us talk of ſometing elſe: Give me an account, pray, how goes *Philoſophy* in your World, if you have any News of it; for theſe many Years I have been ignorant almoſt of all the Concerns there, as well from the Indifference and Diſregard I have found in me ever ſince my quitting the Body, for the Sentiments of Men, as that Monſieur here, who is the only Perſon that has viſited me ſince, having retired in the Country many Years ago, has been incapable of hearing the Particulars of Affairs that concern *Carteſianiſm*, contenting himſelf to learn, and to aſſure me from Time to Time, my Philoſophy continued ſtill to have very many Friends, and very many Enemies.

And I am not much better inſtructed, *I anſwered*, with what regards your Sect, having but begun to intereſt my ſelf in its Affairs, ſince thoſe few Days I have had the Honour of this Gentleman's Acquaintance; however, I will inform you of all that I could hear, or that has come to my Knowledg, without giving my ſelf much Trouble of Enquiry. Your *Philoſophy*, as you

you know, was set up with all the Advantages and Disadvantages of *Novelty*, and it has experienc'd the Fortune which all *New Doctrins* use to find. Many there are that have imbrac'd it with Admiration, and defended it with Earnestness and Passion. It hath met with the Patronage and Protection of Persons commendable for their Parts, Capacity and Politeness; but almost all *Bodies* and *Universities* have rejected it, and declared against it: Each acted in that as in all things else, according to the Principle of Self-interest: Some took your Side, as apprehending themselves thereby distinguish'd and advanc'd above the Herd; others deny'd it, as fearing the diminution of their Credit: The Motive and Pretence of both Parties was the Love of Truth and uncorrupt Doctrin. The Posture of present Affairs hath almost the same Face still; yet if we judge by the Books, whether of *Philosophy* or *Medicine*, brought from *England*, *Holland* and *Germany*, *Cartesianism* hath made very considerable Progress in those Parts. Scarce once in an Age is printed any *Course of Philosophy* according to the Method of the Schools; and almost all the Works of that Nature, that at this Time are publick in *France*, are Physical Tracts that suppose the Principles of the *New Philosophy*: Such Books as treat of an *Universal*, of *Metaphysical Degrees* of *Ens Rationis*, create Fears in the Booksellers Minds; they'll cumber themselves with no more of them, and endeavour to rid their Hands of all that they have left, at any rate, as Merchants do their Stuffs when the Fashion's over. All those Questions, heretofore so famous, wherewith the Presses have groan'd for almost two hundred Years,

and that have found Employment for so many Printers, are no where heard of but in the Schools of the Publick Professors. Out of the Desks there is no talk of the *Thomists*, the *Scotists* and the *Nominals*, at least there is no Distinction made betwixt them; all are numbred in the same Predicament, and on the same Side which they call the *Old Philosophy*, to which is oppos'd the Philosophy of *Descartes*, or the *New Philosophy*.

You have had the good Fortune with your Lustre to efface all the New Philosophers that have risen both in and since your Time; and to make use of a Comparison, that bating the *Odium* of the Subject it is taken from, hath nothing in it but what makes for your Renown; As in *Spain* the Name of *Lutheran* is indifferently given to all *Heretick*s of whatever Sect or Faction, so the Title of *Cartesian* is attributed to all those that have undertaken to make Refinements in Point of Natural Philosophy. I have seen more than one bold Venturer, that in full Dispute hath lifted *Gassendus* among your Followers, though you was undoubtedly his Junior by several Years: And I know a certain *College*, where the Professor durst not speak of *Insensible Matter*, of the *Rules* of Motion, of the Perspicuity of *Ideas*, lest he should be forthwith accused of *Cartesianism*.

For the rest (excepting in the Exercises of some Honest Religious Persons, that doubtless have no ill Design, but not having read you, would yet assume to themselves the Honour of engaging you) that treating you as an Atheist, is quite out of Doors, as is the making that Proposition a Precedent for your Religion, which you

you advance in the Entrance on your *Metaphyſicks*, *That we muſt doubt of every Thing*; yet ſome of the fineſt and cleareſt Heads do not ſtick ſeriouſly to affirm, That the late Converſions of the *Huguenots* in *France* have robb'd you of many Diſciples; for upon their Conviction of the Real Preſence of the Sacred Body of *J. C.* in the *Euchariſt*, they confidently aſſert the Falſity of ſome of your Principles, which they are at a Fault to reconcile with the Reality of that Myſtery.

But no matter, all ſuch as have a ſound and unprejudic'd Notion of Things, though they ſtand diameter to your Opinions, do you Juſtice, and give you an *Encomium* that ſeems none of the leaſt; which is, that they acknowledg you have open'd the Eyes of the Philoſophers of our Times to the Diſcovery of the Riſes of their Method in Philoſophy, by that juſt and reaſonable Reproach of the little Concern they had, for the moſt part, to dive to the Bottom of the Things they treat of, whether in *Metaphyſicks* or in *Phyſicks*, and the little Application they bring with them, both in framing to themſelves and giving their Diſciples clear and diſtinct Ideas of the Things diſputed of; the Abuſe that was made of the ſubtilty of Mind, perverted only to the multiplying Wranglings and trifling Diſputes, to the inventing of new Equivocal Terms, to the confounding rather than enlightning certain abſtracted Queſtions, prudently enough introduc'd the Schools, for Exerciſe and an Occaſion of Diſpute and Emulation, to the Minds of Youth, but ridiculouſly made the main Streſs and Eſſentials of Philoſophy, that from thence had degenerated into an Empty Science, com-

pos'd of Words and Terms that ſignifie nothing: The little Obſervation made upon *Experience*, that is the Mother of Philoſophy: The implicit Dependence they had on the Sentiment of another, often ſuperficially conſidered and ill underſtood.

I can alſo aſſure you, that kind of Advice, though envidiouſly at firſt receiv'd, has not fail'd of its Effect. The *Desk-Philoſophy* has chang'd its Countenance in the principal *Colleges* of *France*. The moſt ingenious of the Profeſſors affect to treat of the ordinary Queſtions, and thoſe that are moſt crabbed with greater Solidity and Method, with more Juſtneſs and Exactneſs, perſuaded that thoſe Queſtions thus handl'd have a greater Power than is imagined to form a Juveniſe Mind, if it is capable of it, to render it Correct and Juſt, to accuſtom it inſenſibly to make thoſe ſo neceſſary Abſtractions, in order to the avoiding Miſtakes and Fallacies in the Train of a Reaſoning, ſpun through a Diſcourſe, in the Examination of a Mathematical Demonſtration, the Diſcuſſion of a Phyſical Experiment, or perhaps a Political Intereſt or Concern.

Since when Men are more ſhy of calling the Proofs they bring for their Opinions, *Demonſtrations*, they are not ſo eager to declare War againſt thoſe that talk otherwiſe than themſelves, and that often ſay the ſame thing. They have learn'd to doubt of certain Axioms that have hitherto been held Sacred and Inviolable, and upon Examination have ſometimes found them unworthy of ſo great a Title. *Occult Qualities* are under a Suſpicion, and a Cloud, having loſt conſiderably of their Reputation. The *Horror*

of

of a *Vacuum* is no where receiv'd but in the Shools, where no one will be at the charge of Glaſs Tubes, and certain Inſtruments which manifeſtly prove the abſurdity of that hackney'd Solution, that hath been conſtantly given to the moſt curious and extraordinary Phenomena's of Nature. All ſort of Experiments are daily made. That of the Gravity of the Air is try'd a thouſand different ways; and there is ſcarce any little Pretender to Phyſick in the Town, but has at his Fingers ends the Hiſtory of *M. Paſchal*'s Experiment.

Here *M. Deſcartes*, interrupting me, demanded what was that Experiment of *M. Paſchal?* I anſwered, it was that made in the year, 1648. upon the *Well* of *Domme* with *Torricelli*'s *Tube*. Wherein the Quick Silver was obſerv'd to fall a great deal lower at the top of the Mountain, than in the middle, or at the bottom; from whence hath been evidently concluded the Gravity of the Air. Does that, reply'd *M. Deſcartes*, go by the Name of *M. P*——'s Experiment? It is then, becauſe he put it in Practice, or rather becauſe he occaſion'd it to be practic'd by *M. Perrier*; for aſſuredly it is not becauſe he invented it, or foreſaw the Succeſs. And if that Experiment ought to bear the Name of its Author, it might more truly be intituled, the Experiment of *Deſcartes*. For it was I that deſir'd him two years before to make the Trial, and aſſur'd him of the Succeſs, as being intirely conformable to my Principles, without which it had never come into his Head, being he was of the contrary Opinion. That Man is Fortunate, continu'd *M. Deſcartes*, in point of

Let. 77. Tom. 2.

Reputation. A great many Perſons were formerly made to believe he had compos'd a Book of *Coniques*, extracted from himſelf by the meer dint of Reaſon, at ſixteen years of Age: That Book was ſent me; and before I had read it half, I concluded he had made great Advantage of *Monſieur des Argues*'s Inſtructions; which Conjecture, a little after was confirm'd by his own Confeſſion. What you ſay (*reply'd I*) a little ſurprizes me; for in the Preface to a Tract, *De l' Equilibre des Liqueurs*, Printed after *M. P*———'s Death, your Teſtimony is quoted upon that Particular, and it is not altogether conformable to that you give at preſent: For there is no notice taken of the aſſiſtance he receiv'd from *M. des Argues*. It is only ſaid, the thing appear'd to you ſo prodigiouſly uncredible, that you would not believe it. But that you was perſuaded that *M. P*——— the Father, was the genuine Author of the Piece, but was willing to confer the Honour on his Son. I know not, *ſaid he*, what they have made me ſpeak or think in that Preface, but I am very well aſſur'd I ſay nothing at preſent, but what I had wrote in plain Terms to *Father Merſennus*, after I had ſeen the Work.

Tom. 2. *Let.* 38.

Tom. 2. *Let.* 38.

After all, ſaid I, *Monſieur*, I am not much ſurpriz'd that *M. Paſchal* at ſixteen years of Age, without any foreign Succour, wrote a Book of *Coniques*, and by chance jumpt in his Thoughts with *M. Deſcartes*; he that at twelve years old, before the ſight of any Books of *Geometry*, made himſelf particular *Definitions*, *Figures*, then *Axioms*, and puſh'd on his Notices ſo far, that when he was caught at his Operations

tions, he was already arriv'd to the thirty ſecond Propoſition of the firſt Book of *Euclide*, which he had never read.

Do you credit that, ſaid *M. Deſcartes*? Why ſhould I not, *ſaid I!* It is ſo affirm'd and circumſtanc'd in the Preface, I have mention'd, as leaves no room to doubt of it. *M. Paſchal*, the Father, deſirous that his Sons firſt time ſhould be imploy'd in the gaining of the *Tongue*, which he taught him himſelf, was cautious to conceal from him the very Names of things, that are us'd in *Mathematicks*, and conſtantly forbore to mention 'em to his Friends when he was preſent: Notwithſtanding according to the Author of the Preface, "The Paſſion that Child had "for ſuch ſort of Science, joyn'd to his pierc- "ing Underſtanding, ſerv'd him inſtead of a "Maſter; ſeeing his Tasks that were order'd "him, rob'd him of all other opportunities, "but his Hours of Recreation (a Circumſtance "very remarkable) he laid out all he could "of thoſe in theſe Speculations. He was con- "ſtrain'd, *ſays he*, to make his own Definiti- "ons, calling a Circle a *Round*, a Line a *Barr*, "and ſo of the reſt. After his *Definitions*, he "made him *Axioms*; and as we proceed from "one thing to another in that Science, he car- "ried his Reſearches ſo far, that he was arriv'd "to the thirty ſecond Propoſition of *Euclide*. "As he had made that Progreſs, his Father ac- "cidently entred the Room he was in, and "found him ſo attentive on the Propoſition he "was upon, that it was a good while before he "took notice of his Approach. But it was a "far greater Surprize to him, upon his Demand, "What he was a doing? To hear him ſay, He

" was in ſearch of ſuch a Thing, which was ex-
" actly the *thirty ſecond Propoſition* of the *firſt*
" *Book of* Euclide. He ask'd him then, What
" made him think of that? He anſwered, it
" was his Diſcovery of ſuch an other Thing;
" thus, as it were, analyzing and explaining
" his meaning ſtill, by the Names of a *Barr* and
" a *Round*, he came down to the *Definitions* and
" *Axioms* of his own *Contrivance*. *M. Paſchal*
" was ſo aſtoniſh'd at the greatneſs and force of
" his Son's *Genius*, that leaving him, without
" ſpeaking another Word, he went at the
" ſame juncture to a Friend's Houſe of his, one
" *M. Pailleur*, admirable in the *Mathematicks*.
" When he came there, he ſtood immoveable as
" a Statue, and as a Man tranſported. *M. Pail-*
" *leur* obſerving that, and ſeeing him in Tears,
" was very much affrighted, and pray'd him to
" conceal no longer from him the cauſe of his
" Diſpleaſure. I weep not, ſaid *M. Paſchal*,
" out of any Grief, but Joy. You know what
" pains I have ſtill taken to prevent all Know-
" ledg of *Geometry* in my Son, for fear it ſhould
" take him off his other Studies. Yet ſee what he
" has done; upon that he related all to him that
" I have ſaid: And *M. Paſchal*, by the Advice of
" his Friend, deſiſted to offer violence to his
" Son's Inclinations, who was yet but a dozen
" years of Age, and gave him an *Euclide*.

Seriouſly, ſaid I to *M. Deſcartes*, do you think a Man could have the Face to circumſtantiate a Lye ſo methodically as this? Could any thing ſeem more probable than the Circles he calls *Rounds*, and the Lines that he calls *Barrs*? Is not that enough to perſuade us of the Truth of his *Axioms*, and the *thirty ſecond Propoſition of* Euclide?

Euclide? What can be more Natural, than the Surprizal of *M. Paſchal* the Father, excepting perhaps it was a little too long, who took thereupon his Cloak, and order'd his Horſes to be put in the Coach, yet remain'd, at his Arrival at *M. Pilleur*'s Houſe, in ſo immoveable a poſture, as was capable to ſcare him? After all it is very fine and extraordinary, and it would be great pity it ſhould be falſe.

And I ſay (*reply'd* M. Deſcartes) it is greater pity that it ſhould be true, and that any ſhould believe it: For if once it be credited, that a Child of twelve years old, that hath never ſeen a Book of Geometry, and in whoſe Preſence all endeavours have been us'd to ſuppreſs the very Name of it, whoſe Mind all day long was taken up with quite different Notices, who had no time to ſpare but his hours of Recreation, which no Body probably order'd him to paſs away in Solitude, ſhould be able to frame to himſelf a Method of *Geometry*, invent *Axioms*, and arrive at laſt to the *thirty ſecond Propoſition of* Euclide, I ſay, if ſuch like things be once receiv'd for Truth, the *Publick* will become the Subject and Game on which, in a ſhort time, the moſt *Romantick Panegyriſts* ſhall ſport the Extravagancies of their Imaginations. That way of praiſing is injurious to the Perſons prais'd, and a Commendation ſo improbable as that, renders the Truths themſelves ſuſpected, that ſhall be found in Company with it. *M. Paſchal* was a Man of a moſt exalted Capacity, but was far from being an *Angel* or a *Devil*. I told *M. Deſcartes* thereupon, I chanc'd into a Company not long ſince, where one was ſpeaking much to the ſame purpoſe as he had done, upon this Topick,

and

and there fortun'd a Gentleman to be there, a Friend to a Society that was under no mighty Obligations to *M. P.* who seeing all People ridicule that Fable, said, in a careless leering Air, that the Author of the Preface and his Friends, did, at most, but Justice to *M. Paschal*, and that they had rather been too backward in that they had said no more; and as he was urg'd to unmask himself, as to the meaning of a thing every one perceiv'd he was not very serious in, he added, That *Hyperbole*, as extravagant as it look'd to him, appear'd but a very mean return for the Obligations they were under, for his Letters to the *Provincial*, in which he had done 'em very signal Favours that were worth these, and that were on a more important Occasion. To which all agreed, and 'twas acknowledg'd *M. Paschal*'s Services to those Gentlemen could not be repaid in a better Coin. Yet I must needs tell you *M. P.* wrote only, by the Memoirs that were given him, and that he thought true, as false and precarious as they were, not knowing the Spirit of a Party wherein he was ingag'd. Undoubtedly he was rather over-reach'd himself, than any design he had to impose on others. Let us say no more on this occasion; and *M. Descartes* recall'd me to the Chapter concerning *Cartesianism*.

He inquir'd then, what Strength he had in the *Universities*, and most celebrated *Colleges* of *France*? And how his Doctrin was look'd upon there? I told him, without Ceremony, what I knew concerning it: That I knew no College that openly profess'd his Doctrin, that most of them were discharg'd from Teaching of it: That in the *University* of *Paris*, extream care was

was taken leſt the Profeſſors ſhould give too much liberty on that ſide: That *Carteſianiſm* had been the Debate of ſeveral *Aſſemblies*, and how that I had heard, from ſome Body, that it had been talk'd of putting it down by an Act of *Parliament*; it was propos'd to the late *Chief Preſident*, *M. de la Moignon*, but that that Expedient was not proſecuted. That the *Univerſity* of *Caen*, which next to that of *Paris* is the moſt flouriſhing, at leaſt, for Philoſophy, had in *one Thouſand ſix Hundred Seventy ſeven*, declar'd againſt that *Doctrin*, and condemn'd it as contrary to *Orthodox Divinity*; denying all hopes to any that ſhould undertake to maintain it, of their admiſſion to any Degree in the *Univerſity*; and forbiding all ſuch as were already admitted, the teaching it *viva voce*, or by Writing, upon pain of forfeiting their Priviledges and Degrees; that the Example of *Angers* had been imitated therein, that two years before had made the like Decrees, which had been confirm'd by a *Placart* of the King put forth at *Verſailles* in the year, 1675. and that moſt of the other Univerſities had gone in imitation of the ſame Proceedings.

This News chaf'd *M. Deſcartes*. And what, *ſaid he*, has no one in theſe occaſions undertaken my Defence? Would no *Corporation*, no *Community* declare for my *Doctrin?* We have ſeen whole *Orders* take on them the quality of *Scotiſts* and *Thomiſts*, and to carry the Intereſts, ſome of an Univerſal *a parte rei*, others of an Univerſal *a parte mentis*, ſometimes beyond the Bounds of a laudable Emulation; whilſt a Philoſophy ſo Solid and Curious as mine, ſhall be abandon'd to the Humours and Caprice of the

Uni-

Universities. I had pardon'd the *Hollanders*, that their ill-natured Behaviour, who were not oblig'd indeed to have those Considerations for a Stranger, as I was in respect of them; but I could never have believ'd they would have treated me so in *France*, my Native Country; to which I am sure I have given much Honour and Reputation. Why were my Bones translated from *Sweden* to *Paris*, if at the same time they intomb'd them with Pomp and Funeral Elogies, they blasted my Memory throughout the *Kingdom?* I quitted, it's true, the World, a little with the soonest: But after all, I left it not before I had acquir'd a most wonderful Esteem. I had taken infallible Measures for the securing my Party: And my Affairs had never been reduc'd to so damn'd a Plight, had my Disciples trod in my Steps, and kept their Eye exactly on my Views and my Designs.

For I must confess, said he, I was not exempt from the Weakness and Blind Side of all Leaders of a *Sect*. I was concern'd for the Progress of my *own*, though I feign'd to seem as indifferent for that as any thing else; and the Hopes I had one Day to see it take Place of all the rest, serv'd as an Incentive to encourage my Endeavours: I had drawn up my self a System of my Management, for the accomplishing my Design. My first Prospect was that of cajoling the *Jesuits*, and sounding them, to try if I could engage them in my Interests, or at least make a Party among them; that would have been a Parting-Blow indeed, and my Affairs for ever after would have stood secure of any Rival or Competitor: They are possess'd of the *Colleges* of the principal *Towns* in *France*, and there are among them a great

a great many Men of excellent Senſe, and capable of protecting my Opinions, if once they were admitted. I ſent them my Works, deſiring them to examine them, and aſſuring them, I would ſubmit them to their Judgment. Circumſtances were very favourable at that Juncture; their *Provincial* was my Countryman, my Friend, and my Relation: My *Regent* in Philoſophy, who was ſtill living, and whom I had obſerv'd to be a better *Naturaliſt* than moſt of the Philoſophers of that Time, wiſhed me very well. In ſhort, I queſtion'd not my Succeſs; but I was highly ſurpriz'd upon *Father Merſennus* his acquainting me from *Paris* that *Father Bourdin*, the Mathematician of the *Jeſuits College*, had publiſh'd Theſes in oppoſition to my Doctrin. Thoſe were the firſt that appear'd againſt me in *France*; ſuch a Thunder-clap as that gave me quickly to underſtand how the Society ſtood affected, and how little Streſs I ought to lay upon the Friendſhip of ſome Particulars. Not long after the ſame *Mathematician* wrote againſt my Meditations, in no very ſerious Style, turning them to Droll and Ridicule; which occaſion'd on my part a very ſmart and vigorous Anſwer. I complain'd thereof to *Father Dinet*, in a Letter that I printed with my Meditations: In a Word, an open Breach was made betwixt the *Jeſuits* and my ſelf. I deſir'd *Father Merſennus* very carefully to watch the Behaviour of the *Fathers* towards me, and to give me Intelligence of all. I made a Reſolution too to fall upon them, and confute ſome one of their Printed *Courſes* that was moſt in Vogue; but I deſiſted from that Deſign for ſome particular Reaſons.

Diverſes Lett. de Deſc. Tom. 3.

Mean

Mean while I had another String to my Bow: There was ſet up a Party at that Time in *France*, diametrically oppoſite to the *Jeſuits*, compos'd of thoſe who write themſelves *S. Auſtin*'s Diſciples, and who were zealous Sticklers for *M. Janſenius*, the Biſhop of *Ypres* his Doctrin. *Monſieur Arnauld*, as young a Doctor as he was, had already got an extraordinary Fame: In the concern I had with him upon account of ſome Objections he raiſed againſt my *Meditations*, which I anſwer'd with the greateſt Expreſſion of Eſteem I had for his Intellectual Capacity, I found out what he was, that is, a Man ambitious of *Diſtinction* and *Novelty*, and of whom one might be ſure, if once one had engaged him in a Party, recommendable with thoſe two Temptations: Therefore I was well aſſur'd of him; and I believe the Reſentment I expreſs'd towards the *Jeſuits*, was that which moſt endear'd him: This fell out ſo well, that from thenceforth you ſhould not ſee a *Janſeniſt Philoſopher* that was not a *Carteſian*. It was likewiſe theſe Gentlemen that brought Philoſophy in Faſhion among the Ladies; and I had Advice from *Paris* at that Time, That nothing was more cuſtomary in their Dreſſing-Rooms than the Parallel of *Monſieur d'Ypres* and *de Molina*, of *Ariſtotle* and *Deſcartes*.

I dream'd next of hooking in ſome *Fraternity* or other; well-remembring what I us'd to hear the late *M. Janſenius* ſay, *That ſuch ſort of People eſpouſe an Intereſt without knowing what it is; and he was of Advice it would be of no ſmall moment for his* S. Auſtin *to be ſeconded with ſome ſuch Herd; becauſe*, added he, *when they are once imbarqu'd, nothing can put a Stop to them* pro & contra

contra. I had an Eye upon the *Minim Fryers*, upon the Score of *Father Merſennus*, who was my intimate Friend, and in great Repute with the Order; but I conſider'd that though thoſe *Fathers* had Men of Parts and Learning among them, yet they were little abroad, and taught not publickly: Again, *Father Merſennus* aſſur'd me, That if the Matter was brought before the Chapiter, *Ariſtotle*'s Party would infallibly carry it, 'cauſe of the Old ones, who had for a long Time equipt themſelves with all ſorts of Philoſophical Furniture, and would never be at the Charge of ſuting themſelves afreſh.

You did well in avoiding that Game (*interrupted our Old Gentleman*) for ſince that a *Father* of their Order, one *Father Magnan*, a Rational, Underſtanding Man, ſtriking a little out of the Uſual Road, and treading in a new Track, has, as I am inform'd, been chaſtis'd in a General Chapiter, and Prohibitions have been made for any to imbrace his Principle; and ſince the main of their Studies as well as of other Seminaries, are *Metaphyſicks* and Divinity: What is properly called *Phyſicks* is not very current; the Offenſive and Defenſive League entred by ſeveral Orders for *Phyſical Predetermination*, againſt *Mean Science*, is the grand concern that hath found them Employment for almoſt an hundred Years.

And it will continue them in Employment ſtill, (*reply'd* M. Deſcartes) for the ſame Reaſon as made me take thoſe Meaſures I ſpeak of, that is, becauſe *Predetermination* and *Mean Science* are become the Sentiments of the Order and Community; a Quality I deſigned to give my Philoſophy, to eternalize it: But, however, when I quitted the World, I left Things in ſo good a tendency

tendency that way, as incourag'd me to hope I had a main Party in the *Congregation* of the *Fathers of the Oratory*. It is a conſiderable Body in *France*, whoſe Buſineſs is Study, many whereof have rendred themſelves Famous by their Knowledg and their Writings. The Emulation that is between them and the *Jeſuits*, with a *Salvo* to the Eſteem and Reſpect they have for one another, was enough to procure me an Hearing in their *Congregation*: What, have thoſe Fathers forſaken me?

You make me call to Mind, ſaid I thereupon, ſome Paſſages in that Buſineſs, that may be worth your Hearing. I know not whether you have reaſon to be ſatisfy'd or diſſatisfy'd with the *Reverend Fathers*, you ſhall be Judge your ſelf. About ten or a dozen Years ago there happen'd ſome Diviſions in the Univerſity of *Angers*, occaſion'd by the *Fathers* of the *Oratory*'s defending certain *Theſes*, wherein much New Philoſophy was interwoven, partly according to your Principles, partly according to the particular Notions of the Profeſſors: The Univerſity took alarm at Sight of thoſe Innovations, and would not ſuffer the *Theſes* to paſs: She gave the Court an Account of it, and the *Father General*. The Court was enclin'd for the Univerſity, which oblig'd the *Father General* to order in the Congregation, That no one ſhould ſwerve from the Ancient Opinions, or any ways teach the New Philoſophy. But here comes a Cup of Comfort for you; ſpeedily after came out a Printed Letter, penn'd in excellent Latin, to the Reverend *Father Senault*, *General* of the *Oratory*, entitul'd, *Epiſtola eorum quotquot in Oratorjana Congregatione Carteſianam doctrinam amant*: Wherein, after having

Recueil de ce qui s'eſt paſſé en l'Univerſité d'Angers.

having laid down the Motives that induc'd them to beſeech him not to ſtraiten and infringe their Minds; on that Particular were added theſe Words, *ut noris quam late Carteſiana hæc labes, (ſi labes eſt)—— graſſetur. Pluſquam ducenti numero ſumus, quos peſtis iſta infecit.*

Hereby you ſee what Strength you had in that *Congregation*: Which yet was no Impediment to the Proceedure and Decree of the *General Aſſembly* of the *Oratory* in 1678. declaring ſhe imbrac'd no Party; but that ſhe always had, and would ſtill maintain that Freedom and Priviledg of preſerving Sound and wholeſome Doctrin; and that ſhe laid reſtraint on none but ſuch as were cenſur'd by the Church, or as favour'd of the Sentiments of *Janſenius* and *Bains* in Divinity, or of the Opinions of *Deſcartes* in Philoſophy.

Oh the Baſe and Cowardly——cry'd *M. Deſcartes*, all enrag'd. Softly, *Monſieur*, I reply'd, if you your ſelf had headed a Corporation, whoſe Eſſential Intereſts you had engag'd to maintain, you would have had very different Thoughts from thoſe you now have under the Quality of a Leader of a Sect. Neither Prudence nor Conſcience could oblige a Man to become the *Martyr* of a Philoſopher. Matters are of a quite diſtinct Nature in Point of *Philoſophy* and *Religion*: A Man may allow of the Opinions of a Philoſopher, conſider'd in themſelves, and at the ſame Time be included in ſuch Circumſtances as make it prudence to Acquieſce.

But two things there are, which I have already obſerv'd to you, which ſhould make you overlook thoſe Paltry Affronts your Philoſophy has met with. The firſt is, that what is in it

more choiſe and better than ordinary, begins to be authoriz'd in the Schools of the moſt zealous *Peripateticks*; who no longer oppoſe the Truth, that you have infus'd into them, but only ſo husband *Ariſtotle*'s Stake, as it may not be ſaid that ever any Philoſopher had a clearer View than he. You know the Adventure of the laſt Age in *France*; the wiſeſt Heads of the Kingdom could do no otherwiſe than approve the greateſt Part of the Regulations made in the *Council of Trent*, notwithſtanding there were Reaſons that obſtructed the adhereing to that Council, on Diſcipline-account. What was done? The States of *Blois* made Ordinances exactly like a great Part of the Decrees of that Council: Thus, without admiting the Council, they follow'd in effect the Purport of it. The *Peripateticks* have in ſome ſort tranſcrib'd the Conduct of thoſe grave *Politicians*. 'Tis a Crime among them to be a *Carteſian*, but 'tis an Honour to make good Uſe of the beſt Part of *M. Deſcartes*. And to compare the Fortune of your Doctrin with that of another that in our Days hath made ſuch a Buſtle in the World, before the Propoſitions of *Janſenius* had been condemn'd at *Rome*, his Followers highly complimented him upon them: His was the Pure and Uncorrupt Doctrin that was copied from the great S. *Auguſtin*; but they had no ſooner been cenſur'd as Heretical, but they vaniſh'd in a Trice, and could not be found in *Janſenius* his Book: No one could heartily believe they ever had been there, and in Spight of Bulls of *Popes* and Ordinances of *Biſhops*, 'twas reckon'd a Mortal Sin to ſign a Condemnation of Propoſitions, and a Form of Faith, without the Diſtinction of *De Jure & de Facto*.

Facto. The quite contrary happen'd in the Affair I am ſpeaking of.

At firſt, when the *Carteſians* made Mention of *Subtil Matter*, and ridicul'd the *Horror* of a *Vacuum*, talk'd of the *Elaſtick* Vertue of the Air, the Preſſure of its Columns, and the manner of the Impreſſion of Objects on our Senſes, *Ariſtotle* was brought to confront them with a quite contrary Doctrin.

Since that Time, upon Examination of the Reaſons on which your Propoſitions in thoſe Inſtances depended, they would not ſay that you were in the Right; but many undertook to affirm, That *Ariſtotle* had taught the greateſt Part of that before you. There hath been ſince diſcover'd in his Writings an *Ethereal Matter*, the manner of *Senſations* by the *Concuſſion* of the *Organs*; the Demonſtration of the *Gravity* of the *Air*, and the moſt delicate Truths of the *Equilibrium* of Liquors: So inſtead of the *Janſeniſts* abandoning, or ſeeming to abandon the *Right*, and ſheltering themſelves under the *Fact*, the *Peripateticks* fall on Poſſeſſion of the *Right* by the *Fact* itſelf; that is, the *Peripateticks* now find in *Ariſtotle* what according to themſelves had not been viſible for theſe thirty Years. On the contrary, the *Janſeniſts* have loſt Sight of the Propoſitions they had pointed to us heretofore themſelves, before they were condemn'd: So that would you make any Abatements, as I hope you will, that I may make good my Promiſe I made *Voetius* your Old Friend in *Holland*, we ſhould ſee *M. Deſcartes* turn *Peripatetick*, and *Ariſtotle Carteſian.*

The other Thing, that is Matter of Conſolation to you, and that in Defiance to all the Efforts of your Enemies muſt encourage you to hope for the Immortality of *Carteſianiſm*, is the uncontroulable Liberty that's left to every one of Writing for and againſt it: And that at this Day the moſt Solid and Ingenious Patron of the New Philoſophy, is a celebrated *Father* of the *Oratory*, whoſe Books are in great Reputation. He forthwith requir'd his Name and Character. He is call'd, ſaid I, *Father Malebranche*: He's a Man of an extraordinary piercing Judgment, of profound Thought, that has a wonderful Gift at methodizing his Reflections, which he opens and diſplays in the neateſt and moſt lively manner imaginable; that knows however to give an Air of Truth and a probable Turn, to the moſt extraordinary and abſtracted Notions; that is skill'd to the utmoſt Perfection, in preparing the Mind of his Reader, and intereſſing him in his own Thoughts. In ſhort, he is the moſt charming *Carteſian* that I know. His principal Work is called, *The Search of Truth*; and it is from that in particular that he hath been acknowledg'd for ſuch as I have deſcrib'd him: Yet I cannot conceal from you a little Accident that may ſomewhat allay the Joy that News muſt excite in you; which is, That this Illuſtrious Champion of the New Philoſophy, has been ſometime ſince at Variance with *M. Arnauld*, whoſe Friend he had ever been before, which made a kind of Civil War. The Onſet and Defence on both Sides is manag'd with Vigor and Courage; each of them combate in their own way: Volumes of five or ſix hundred Pages apiece are ſent out by *M. Arnauld* in

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the turning of an Hand: The other is leſs luxuriant, but more ſtrict and preſſing: He takes thoſe Captains for his Precedent, who only make uſe of ſome ſelect Troops, without any regard to Number, that always march cloſe and in good Order, who let the Enemy wheel about as often as they pleaſe, but are ſure to break their Ranks whenever they ſee an Advantage. Diſcourſe is various concerning the Motives of that War; *M. Arnauld* is the Aggreſſor: The moſt refin'd Politicians, who, as you know, never fail to make the beſt of their Talent on ſuch Occaſions, ſay, It is a Trick and Evaſion of the *Old Doctor*, who has ſeveral other ſuch at command. Some Years ago there appear'd two Books againſt him; one was titul'd, *The Spirit of* M. Arnauld, wrote by a *French Proteſtant Miniſter*, retir'd to *Holland*; that's a very roguiſh Book, I muſt confeſs, and full of Venom and Gall, but he leaves *M. Arnauld* inextricably in the Briars; he not only turns his own Weapons upon him, but alſo againſt the *Catholick Religion*, and concludes directly from the Principles and Practice of *M. Arnauld*, that moſt of the Arguments he takes to be moſt forcible and Advantagious to the *Catholick Religion*, are nul and inſignificant, are meer Shew and Out-ſide, fit only to dazle the Eyes of the Ignorant, and ſuch as cannot penetrate to the Bottom of Things.

The other Book, which was printed the firſt of the two, but was not made publick till ſome time after, was written by a *Jeſuite* againſt a *French* Tranſlation of the *New Teſtament*, commonly call'd, *The* Mons *New Teſtament*, done by the Gentlemen *du Port Royal*, and whereof *M. Arnauld* took upon him the Patronage and

Defence. That Book of the Jeſuite is Solidly, Scholar-like and Politely wrote. He very pertinently comes over *M. Arnauld* on many Occaſions, and adds from time to time, in thoſe Places, he challenges him to give an Anſwer to ſuch and ſuch a Point: Notwithſtanding, thoſe two Books found no Reply; and no one could ſay they were unanſwer'd, becauſe they were deſpiſed and did not deſerve the Pains. Religion it ſelf was ingag'd, that Anſwer ſhould be made the firſt (as hath ſince been done by another Hand) and *M. Arnauld*'s Honour and Reputation were intereſs'd to ſatisfy the Scruples, the Evidence of Fact, and the Force of Reaſons in the ſecond, had rais'd in the Minds of Men. See then what was the ſenſe of the *Politicians* of the *Commonwealth* of *Learning*.

'Tis known by long Experience, that *M. Arnauld* never us'd to be very Dormant in the caſe of Books wrote againſt him. Whence then proceeds this extraordinary Patience, he would fain ſeem to have at preſent? Whence comes it, that inſtead of defending himſelf againſt his Enemies, that make voluntary Inſults to attack him, and fall ſo foully on him, he makes himſelf new Adverſaries, and out of a gayety of Humour falls to Daggers-drawing with his Friends and Allies, whilſt his Country is abandon'd to the Pillage and Deſcretion of his Enemies? Here is, ſay they, the ſhort and the long of the Buſineſs. Thoſe two Books *Nonplus M. Arnauld*. The firſt upon ſeveral Articles preſents you with an *Argumentum ad Hominem*, and is beyond Reply. The ſecond is penn'd with that Circumſpection and Exactneſs, as Wards off all Paſſes, gives not the leaſt hold, and

and blocks up all the out-lets, where ere his Adverſary might eſcape him. It would be no part of Prudence to engage on ſo diſadvantagious Terms. He muſt not, however, be ſeen to baulk or decline the Challenge; (and beſides *M. Arnauld* had reſolv'd to leave the World, whenever he deſiſted to make a noiſe in it, and to Write and Diſpute whatever it coſt him:) Therefore he cunningly procures himſelf a Diverſion. He picks a random Quarrel with *Father Malebranche*, threatning an Attack on a Treatiſe of his, concerning *Nature* and *Grace*, which he had preſum'd to publiſh contrary to his Advice. He compiles a great Volume, againſt two or three Chapters of the *Reſearch of Truth*. That Book is anſwered. *M. Arnauld* thereupon makes his Reply. *Father Malebranche* charges again. *M. Arnauld* makes yet another Onſet. Here ſome are inquiſitive, why *M. Arnauld* neglects to anſwer both *M. Jurieu* and the *Jeſuite?* Hey day! cry others, how would you have him anſwer them? Does not *Father Malebranche* find him his Hands full? Whoſe little Volumes he's forc'd to overwhelm with bulky Books, to obſtruct the entrance of that monſtrous Impiety into the Church, *viz.* the Doctrin of a Corporeal God: Without which no Man can find out what he means by his intelligible Extenſion, that is, he ſays, in God. However the other Concern is urgent and requires Diſpatch. But what would you have a Man do? they add. Is it poſſible he ſhould be every where at once? Whilſt the *King* of *Poland* march'd with all the Forces of his Kingdom to raiſe the Siege of *Vienna*, was he not neceſſitated to ſuffer the

Garriſon of *Kaminiec* to over-run *Podolia*, and the *Tartars* to inſlave *Ucraine* ?

If that Conjecture is not true, ſaid *M. Deſcartes*, it is however very probable, and thoſe Gameſters play the Politician not amiſs. But what (*purſu'd he*) is the Subject of Diſpute betwixt thoſe two famous Authors ? For I aſſure you, I perceive a Concern upon me, upon their Account. The Matter in Debate (*I anſwer'd*) is of the *Nature* of *Ideas*, and the manner of our apprehending Objects that are without us. *M. Arnauld* would have it, that our *Idea's* are nothing but the Modifications of our Soul. *Father Malebranche* pretends, that that Opinion is unwarrantable, and maintains we have no other perception of Objects than in God ; who being every where, is intimately united with our Soul, and who following the general Laws of the Union of the Body and Soul, communicates to us the Idea of the Object that he hath in himſelf, and at once makes us apprehend the Impreſſion of it. Both one and the other ſtrive upon occaſion, to ingage you on their ſide, or to ſhew rather, that they advance nothing contradictory to your Thoughts upon Ideas : But I am of Opinion, you never penetrated ſo deep in that Affair, as that either of them can gain much by your Authority.

What you ſay of me is true (*reply'd* M. Deſcartes ;) but which at laſt of theſe two Combatants have got the better on't ? I anſwer'd him, I was not raſh and inconſiderate enough, to ſet up for a Decider of the Difference and Advantages of thoſe two Hero's : That I could only ſay that they fell to't in earneſt : That though

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M. Arnauld had propos'd to himſelf the encountring *Father Malebranche*'s Tract of *Nature* and of *Grace*, he thought it adviſable to begin with the Confutation of what he had written touching Idea's in his *Search of Truth*, looking on that paſt (to uſe his Thought and his Expreſſion) as the Outworks of the place he had a Deſign to ruin. That the Subject being very Abſtracted and Metaphyſical, and above the ordinary Capacity of Men, and *Father Malebranche*'s Syſtem on that Particular, requiring a very great Attention to comprehend it, *M. Arnauld* ſeem'd to have taken deſignedly that Method of Aſſault, for the making a more advantagious Effort on his Adverſary; but that *Father Malebranche*, without giving up his Outworks, wherein he acquit himſelf admirably well, had drawn them into the Body of the place, that is to ſay, had incorporated them with the Intereſts of *Grace*, which is very diſadvantagious Ground, and too ſlippery a ſtand for *M. Arnauld*, where he was very cloſely preſs'd. Yet that I durſt not undertake for the Succeſs of *Father Malebranche*'s Self on that Side, becauſe of the great Experience of *M. Arnauld* in ſuch ſort of War, wherein he undoubtedly merits the Encomium *Admiral Chatillon* uſed to give himſelf, *viz.* He had wherewith to be diſtinguiſh'd from the greateſt Captains that ever were, in that having been always beaten by his Enemies, having loſt all the Battles he had been oblig'd to Fight, after all his Misfortunes, he ſtill ſtood upon his Legs, in a capacity to relieve his Party, and bearing ſtill a Part and Figure, able to diſquiet thoſe by whom he had been worſted. I might likewiſe add, without af-

affronting *Father Malebranche*, he is already ſenſible of the loſs he has ſuſtain'd ſince that firſt Breach: For before that unhappineſs, and whilſt he was a Friend of *M. Arnauld*, he was every where extoll'd for a ſublime and infinitely penetrating Genius; and at preſent, he's a Man that ſpeaks nothing but Perplexities and Contradictions, whom one can neither underſtand nor follow without danger of Error: So true it is that *M. Arnauld*'s Friendſhip is at this day, as it ever has been, a prodigious bank of Merit to thoſe that are ſo fortunate to injoy it, and that Societies, no leſs than particular Perſons that were deſtitute of that Advantage, would be very little better for their Reputation.

As I was thus entertaining Diſcourſe with *M. Deſcartes*, I perceiv'd in an Inſtant a change in me, that carry'd ſomething in it much like what we experience in ſome ſudden Faintings, wherein all things ſeem to alter and turn colour. I could never have believ'd a Soul ſeparate from the Body, had been capable of ſuch an Accident. *M. Deſcartes*, who was aware of it, and well underſtood the cauſe, left me for a moment to wait on *Ariſtotle*'s *Embaſſadors*. I knew not what Intercourſe they had, till the *old Gentleman's* Information, on our return to th'other World. He told me *M. Deſcartes* declin'd entring all Diſpute and Buſineſs with them; only aſſuring them he had not the leaſt Deſign of making any Inroad into *Ariſtotle*'s Dominions; but that he thought it a difficult piece of Work to effect a through Accommodation; and that it would be proper for each to preſerve their Liberty in Opinion, as before, without being reſtleſs, and concern'd to bring over that of others

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to it; notwithſtanding to the end their Voyage might not be wholly ineffectual, he promis'd to ſee that the *Carteſians* behav'd themſelves with greater Reſpect and Eſteem towards *Ariſtotle*, upon condition *Ariſtotle* would reſtrain the *Peripatetick* from flying out with that out-rage againſt *Carteſianiſm*.

To come to my Spiritual *Metamorphoſis*, I knew not the reaſon of that neither till my return; and it was this. We muſt ſuppoſe that as long as our Soul is united with our Body, the moſt part of its Ideas and Conceptions depend on the diſpoſition of our Brain. The diverſity of that Diſpoſition conſiſts, as ſay the *Peripateticks*, in the difference of the *Species*, Apparitions or Images of Objects, contain'd in the Cavities of the Brain, or imprinted on its Subſtance. The *new Philoſophers* more truly ſay, That thoſe kind of Pictures are nothing but the Traces and Footſteps ſtampt on the Brain, by the ordinary Current of the Animal Spirits, that flow in great Plenty, as in little Rivers, and wear themſelves a kind of Channel, to which they uſually keep. In what way ſoever that different Diſpoſition cauſes the different Idea's and different Judgments of the Soul (for it is an inſcrutable Myſtery) it is certain it is done, and that different Ideas ſuppoſe different Traces. So that ſhould a diſſection be made of a *Peripatetick* and a *Carteſian* Brain, with the help of good Microſcopes, for the diſcovery of thoſe Prints that are exquiſitely fine, one ſhould ſee a prodigious difference in the Complexion of thoſe two Brains. I never indeed queſtion'd that Truth, but I thought that dependence of the Soul laſted no longer than it was in the Body,

Body, and that as ſoon as the Separation was perform'd, it had no more Correſpondence with it: But I experimented the contrary, and my Fellow-Travellers aſſur'd me that ſo long as the Body has its Organs ſound and free, let the Soul be ten thouſand Worlds apart, it will receive the ſame Impreſſions, as if it reſided in it: And that if *M. Deſcartes*'s Snuſh had not lax'd the ſenſitive Nerves, I ſhould have ſeen, whilſt I was in *Deſcartes*'s World all the Occurrencies, the Eyes of my Body were preſented with. I ſhould have heard every noiſe that beat upon the Drum of my Ears: And ſo of all the reſt.

So aſtoniſhing an Effect as this makes no Impreſſion on *Philoſophical* Souls: For if they be *Peripateticks* they preſently explain it by the *Sympathy* betwixt the Soul and Body of the ſame individual; and if they be *Carteſians* they expound it by the general Laws of the Soul and Bodies Union, which is in cauſe that God on occaſion of ſuch and ſuch Motions made in the Body, produces ſuch and ſuch Thoughts or Perceptions in the Soul; and ſay they, one of theſe Laws is, That whilſt the Organs of the Body are capacitated for Imployment, the Soul wherever ſhe is, receives the Impreſſions of Objects that affect them; it being as eaſy a thing for God to advertiſe the Soul of that Impreſſion, when ſhe is remote from the Body, as when preſent, proximity of Place being wholly inſignificant in the thing; ſince, according to them, the Motion of the Organs is not the real cauſe that produces *Senſations*, but only the occaſional cauſe, that is, that which offers an occaſion to *God Almighty* of producing them in the Soul.

My

My Old Gentleman then, as I was saying, in our Return confess'd the Trick *Father Mersennus* and himself had agreed to play me: They had given Instructions, before they departed, to the *little Negro*, that was commission'd to guard my *Corps*, at such an Hour, in which they easily foresaw we should be arriv'd to *M. Descartes*'s *World*, to take Care so to determine the Animal Spirits in my Brain, as they might no longer keep the beaten Tracks they had been us'd to, for the exciting *Peripatetick Species* in my Mind, but to make them glide in such a Current as was necessary, and as he knew how, for the implanting *Cartesian Ideas* in their Room; which he perform'd with that Dexterity, that whether it was by the *Legerdemain* of *Sympathy*, or by vertue of the *General Laws* of *Union* of the Body and Soul, my Notions were all in an instant turn'd topsie turvy: And I, that a Moment since could see nothing in that *Immense Space*, in which I was, began to perceive *Matter* there, and to be convinc'd that *Space*, *Extension* and *Matter* were all one and the same thing. After which, as often as *M. Descartes* bade us to conceive how such and such Motions were effected in Matter, I saw them more distinctly than your most clarify'd *Cartesians* do your *Chamfer'd* Parts of Matter wreath'd in shape of little Skrews, by the Struggle they have to squeez betwixt the *Balls* of the *Second Element*, or to constitute a little *Vortex*, round the *Loadstone*, and to cause that wonderful affinity that is found betwixt that Stone and the Poles of the Earth, and with it and Iron.

It is plain that an Universal Revolution of Ideas, like this, cannot happen in the Soul, without causing an extraordinary Commotion in

its

its Substance, no more than a general Alteration of Humors can occur in the Body, without a Change of its Constitution. I was therefore infinitely surpriz'd at so prodigious a Change, being wholly unable to give any probable Guess at its Cause, but could not help attributing it to some Secret in *M. Descartes*'s Philosophy; who returning quickly after, address'd me in a more Familiar Air than at my first Reception. Well, what, shall we begin to fall to work upon our World? I see you are at present capable and worthy of reaping that Satisfaction. Monsieur, *said I*, I know not where I am, nor what I ought to think of my self: But certainly nothing can more effectually dispose me to a Belief that you are capable of becoming the Creator of a World, than that Power you manifest over Spirits. Yes, *Monsieur*, I acknowledg *Space*, *Matter* and *Extension* to be the self-same Thing: I see plainly in that Space, Materials for the Building a *New World*; and if you once accomplish so vast and prodigious a Work, from this Time forward I renounce my Body to live here with you for ever and ever, to the End of the World, nothing seeming comparable to the Advantage of living with the most Wise and Puissant Soul, that ever came out of the Almighty's Hands.

You'l be better advis'd than that, reply'd *M. Descartes*; it behoves you to expect the Orders of the *Sovereign Being* for an entire Dismission from your Body; nor is there any Necessity for it, to have all the Satisfaction that you wish. In less than two Hours Time I'll make you a *World*, wherein shall be a *Sun*, an *Earth*, *Planets*, *Comets*, and every thing you see more Curious and observable in yours; and since this World

I am

I am about to make is not to ſtand for good and all, but is only an Eſſay of another I intend to build at my Leiſure, of far greater Capacity and Perfection; I can eaſily interrupt and break the Motions, to let you ſee in a little Time the different Changes, which occur not in the Parts of the great World, but in the Proceſs of Years

Come on then, let us begin, ſaid he, but follow me exactly in the Principles I lay down, and the Reflections I ſhall make you obſerve: Above all interrupt me not. After theſe few Words *M. Deſcartes* prepar'd himſelf for the executing his Projection: Which was by the Expoſition, or rather Suppoſition of ſome of his moſt Important Principles, thought neceſſary to qualifie us for the comprehending the Diſpatch of that grand Maſter-piece.

Conceive, in the firſt Place (*ſaid he*) that all this *vaſt Space* is *Matter*: For this Space is *extended*, and *nothing* is not capable of being ſo. This Space therefore is an extended Subſtance, or which is the ſame Thing, *Matter*. Whoever can doubt of this Truth, can doubt if a Mountain can be without a Valley. Conceive in the ſecond Place, That in Nature there are two inviolable Laws: The firſt is, That every Body will ever maintain the Poſt and Capacity it has once been put in, will never change it till ſome External Cauſe ſhall force it; if it is in reſt, it will be in Reſt eternally; if it is in Motion it will continue eternally in Motion; if it is of a Square Figure it will preſerve its Square Figure always.

The Second is, That a Body always naturally continues its Motion in a right Line, though the rencounter

rencounter and justling of other Bodies frequently disturb it from its Regular Course, and from hence follows an indisputable Principle, confirm'd by infinite Experiments; *viz.* That a Body, circularly moved, constantly endeavours to get farther from the Centre of its Motion; and if it fortune to get rid of a Body or Bodies, that constrain it to move circularly, it is always sure to make its escape by the *Tangent* of the *Circle* it describ'd, in its Motion.

The Line A G *is the Tangent, the Stone would describe, supposing it to be freed from the Sling at the Point* A.

These Principles are the rich and fruitful Sources of that Infinity of admirable Truths, of which *True Philosophy* is compos'd, and the only Rules I will and ought to follow, in the Production of the *World* I am about.

This

This ſhort Speech ended, I was wonderfully edify'd in ſeeing *M. Deſcartes* fall to Prayers, and make an humble Acknowledgment to God of all thoſe intellectual Gifts and Bleſſings he had vouchſaf'd him.

Sovereign Being (*ſaid he*) thou beareſt me witneſs, That never Mortal acknowledg'd that abſolute Dominion thou haſt over all thy Creatures, with greater Reſpect and Submiſſion than my ſelf: So long as I had my Being in the Land of the Living, I made it my Buſineſs to convince Men of that entire Dependence they have on thee, having perſuaded many of that important Truth, That thou art the only Being which can produce every thing in the World: That it is a puniſhable Pride in Men to conceit themſelves capable of cauſing the leaſt Motion imaginable in Matter; and that the very Motion their Soul ſuppoſes ſhe influences on the Body, which ſhe animates, is purely the effect of thy Almighty Power, that in concurrence with the Laws thy Wiſdom itſelf has confirm'd, moves the Members of the Body with ſuch exactneſs and celerity, on occaſion of the Deſires and Inclinations of the Soul, as perſuades her, it is herſelf that moves them; though at the ſame Time ſhe confeſſes her Ignorance of the manner whereby it muſt be done. That bright and lively influx, wherewith thou haſt enlightned my Underſtanding, hath guided me out of that Laberynth of common Deluſion, and open'd me the way and Method I ought to take, in the Study and Contemplation of thy wonderful Works. Though I at preſent undertake to work upon that immenſe Matter, which thy infinite Bounty ſeems to have left at my Diſpoſal, and though I have

aſſum'd the Freedom of warranting my Diſciples the *Production* of a *World* like that of thy own Making; yet it is wholly in Dependence on thy Power I have made this account. Yea, Lord, I ſhall contribute in no wiſe to that Operation, but by the Deſires of my Will, which thou out of thy gracious Goodneſs wilt be pleaſed to ſecond, by impreſſing ſo much Motion on this Matter as I ſhall wiſh for, and by giving this Motion Determinations neceſſary to the End which I propoſe; Reaſon and Experience having taught me, That every pure Spirit, ſuch as am I my ſelf, by one of the Univerſal Rules, to which thou conformeſt thy external Actions, hath Right and Priviledg of ſo much Motion as is ſufficient to move the Matter of a World. Manifeſt then, Lord, thy Power in Condeſcention to a Spiritual Creature, that makes this humble Confeſſion of his Weakneſs, and give us farther occaſion to praiſe and glorifie thy Name.

Having finiſh'd his Devotion, *M. Deſcartes* mark'd out a round Space, of about five hundred Leagues diameter, for the making a little Sampler of his World, whereupon thus he ſpake.

Gentlemen, I ſhall at preſent only repreſent you the *Solary Vortex* of your World, and all that is therein; that is to ſay, the *Sun*, the *Earth*, the *Planets*, the *Elements*, the Diſpoſition of its principal Parts, and the different Relations and Dependences they have on one another; if you will honour me with a Viſit ſome Years hence, you ſhall ſee the *Great World* finiſh'd.

The

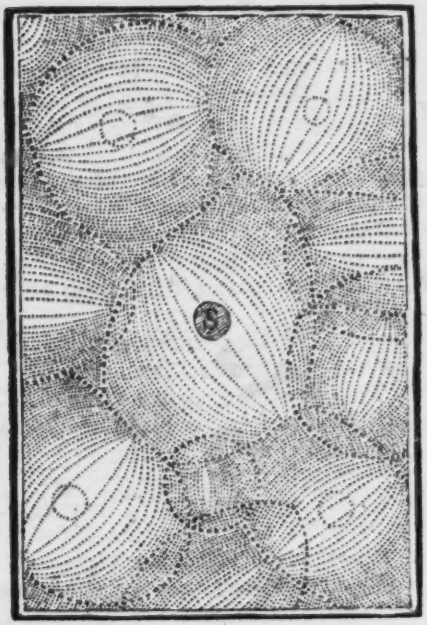
The firſt thing I ſhall do is to divide in almoſt equal Parts all the Matter comprehended in the Space I have chalk'd out. All thoſe Parts ſhall be very Small, but yet they muſt be leſs before I have done with them: They muſt not all be of a Spherical Figure, 'cauſe if they were all ſo ſhap'd, there muſt neceſſarily be an Interval, or *Void* betwixt them: But a *Void* is impoſſible; they muſt therefore be of all Shapes and Figures, but angular for the generality.

Secondly, whereas the Union of the Parts of Matter purely conſiſt in that Repoſe they are in, one by another; that Diviſion I propoſe to make, will laſt no longer than I ſhall agitate them ſeveral ways, and drive them on every Side.

Thirdly, Since the Fluidity of Matter is nothing but the Motion of its ſmalleſt Parts, agitated different ways; upon my Diviſion and Agitation of it in that wiſe, I ſhall make it fluid, as hard and conſiſtent as it is at preſent.

Again, this round Space of five hundred Leagues, which I have cut out for the building of my little World, being once made fluid, I ſhall divide it into twenty Parts, or twenty *Vortexes*, that ſhall be ſeverally conſtituted of infinite inſenſible Parts of Matter.

S *The Vortex of the Sun.*



For the comprehending what I mean by this Word *Vortex*; imagine to your ſelf a round or oval Space of Matter, which I divide in a thouſand or ten thouſand little Parts. Suppoſe theſe little Parts, ſo many little Giggs, each made to turn about their Axle or their Centre; and bowl'd

and bowl'd at the ſame time about the Centre of that round or oval Space; and this is what I call a *Vortex*.

Finally, you muſt conceive each *Vortex* as a kind of *Firmament*, at whoſe Centre will be an *Aſtre* or fix'd Star; ſo that in making *twenty Vortexes*, in the Space which I have laid out, I ſhall make twenty *fix'd Stars*: But at theſe *fix'd Stars* you'l be ſurpriz'd, and will have the pleaſure of obſerving, that but one in twenty will continue, which will repreſent your *Sun*: All the reſt will become partly *Planets*, partly *Comets*: Nor will there of thoſe twenty, above one great *Vortex* remain, which will be that of the *Sun*, in which will be form'd two little new ones, to repreſent the *Vortex* of your *Earth*, and that of *Jupiter*. This will be ſufficient, *Monſieur*, *ſaid he*, addreſſing himſelf to me in particular, to qualify you for the comprehending the Work I am going to compleat. For the reſt of my Principles and Concluſions, which you have ſeen in my Phyſicks, I ſhall more commodiouſly explain them in the performance it ſelf, as occaſion ſhall be offer'd.

With that *M. Deſcartes*, *Father Merſennus*, and my old Gentleman, betook themſelves to three different Stations in the Space, and began to agitate and churn the Matter with a prodigious Alacrity. The twenty *Vortexes* were come in an Inſtant, each having their Motion determin'd on every ſide, and being ſo order'd that the *Poles* of *one Vortex* were terminated at the *Ecliptick* of an *other*. And hence it is that *M. Deſcartes* calls the *Circle* of a *Vortex*, that which is remoteſt from its *Poles*. *Part. 3. Princip.*

Whereas the parts of every *Vortex* were ſeen out of hand to be figured Angularwiſe for the generality, and to move round about their Centre, there was a mighty grating and claſhing occaſion'd by the Fraction of Angles, that neceſſarily followed the Struggle every Part made to turn its ſelf about its own Centre. And that was the firſt Reflection *M. Deſcartes* occaſioned me to make, for the explaining to me the Origin and Production of the *Elements*, as they are diſtinguiſh'd in his *Phyſicks*. You ſee, ſaid he, how from the agitation of Matter neceſſarily iſſue the *Elements*, at which the Philoſophers of your World have blanched and bogled ſo. From a *Cube* or any *Angular* Body whatſoever, to make a *round* one, what more is required than the paring off the Angles and Inequalities that are found in the Surface of it? And what but this is done in the Motion I have impreſſed on all the little parts about their Centre? Is it poſſible they ſhould turn thus without a mutual Unhorning one another? And can that continual rubbing of one againſt another, fail to poliſh them more exactly than if they had been turn'd in a Lathe? Theſe little Balls conſtitute that kind of Matter which I call my *ſecond Element*.

But now in the Interim of the ſhivering of theſe Angles, you ſee (and 'tis impoſſible to be otherwiſe) there is a World of little *Filings*, prodigiouſly leſs than the *Balls* of the *ſecond Element*; and it is that diminutive Duſt which I call the *Matter* of the *firſt Element*. But laſtly, among the parts of the firſt Element, as minute as they are, there are ſome leſs than others, and whereas they are nothing but the Scrapings of the ſecond Element, they are of very

very irregular Figures, and full of Angles: Which is the reaſon they entangle and fetter themſelves with one another, and cake into a *ragged* and *groſs Maſs*, which I call the Matter of the *third Element*: And theſe are my *three Elements*, which as you ſee, I had reaſon to defy the World to find a fault with.

Here *M. Deſcartes* was ſome Moments without ſpeaking to me, being extraordinary buſy in the management of his Project, and the critical regulation of the firſt Motions of his *Vortexes*. Mean while the little parts of the Matter of every *Vortex*, by the means of their turning on their Centre and rubbing againſt each other, even'd and poliſh'd themſelves by little and little, and ſtill as they became perfectly Globular, they loſt of their Bulk and decreas'd in Size. Then it was that I began to ſee the Conſequences of the Rules of Motion, which *M. Deſcartes* had readily ſuppos'd. For ſeeing theſe little Balls took up leſs room than formerly, and ſeeing they kept ſtill a turning round, and their Figure rendred them more fit for Motion, I perceived them preſently to quit the Centre of the *Vortex*, and to gain the Circumference. By that Effort obliging the Matter of the *firſt Element*, that was diſpers'd through all the *Vortex*, to fall down to the Centre; and to conſtitute a Maſs of that extreamly fine and powdered Duſt, that ſtill whirl'd round, and attempted to recover the Circumference from which the *Balls* of the *ſecond Element* had chas'd it: But all in vain, becauſe the *Figure* of the parts of the *ſecond Element* maintained them in their Poſt; and all that could poſſibly be done by the Matter of the *firſt*, was upon occaſion

to ſlip into the Intervals, the Balls in the Circumference of the *Vortex*, ſometimes left betwixt them.

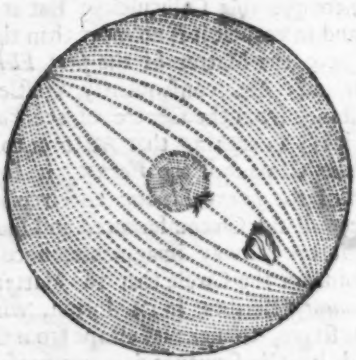
The Satisfaction *M. Deſcartes* obſerv'd I took at that petty Play, and the Facility I manifeſted in perceiving or conceiving whatever he commanded me, highly pleaſed him, and engaged him to explain to me one of the moſt curious Myſteries in Philoſophy. I could wiſh, ſaid he, you had your Body here, you would let in thoſe admirable Deductions from the Principles I have laid, with a greater *Guſto* and Delight. Now you only ſee in the *Centre* of the *Vortexes* a heap of Duſt or of ſubtil Matter, of the firſt Element; but had you your Body and your Organs with you, capable of the Impreſſions that heap of Duſt would make, you'd ſee for every heap of Duſt a *Sun*. *Monſieur* (*continued he*) that very *Sun*, whoſe Splendour and Beauty you ſo often have admir'd in your World is nothing, in affect, but an Amaſs of that ſame Duſt; but Duſt inſtigated with ſuch a Motion as I explain in my Philoſophy, and you at preſent ſee.

To give you a clear Inſight in this Matter, I need only ſuppoſe one thing; which I am ſure you wont deny me; and which, on occaſion, I could ſhew you in *Ariſtotle* himſelf, to wit, that *Viſion* is cauſed meerly by the *vibration* of the *Threds* wherewith the optick Nerve is wrought. And it is on Account of that *vibration*, that a Man falling rudely on his Head, or who walking in the dark, runs his Face againſt a Poſt, ſees a ſudden flaſh of Light like the glaring of a Candle. It tortures the *Naturaliſts* to explain the manner how that vibration cauſes us to perceive all luminous and bright Objects. Upon

what

what *Hypotheſis* ſoever they proceed, they meet with inconquerable Difficulties: But at the bottom, and in earneſt it is no more than this.

See here the Matter of the *firſt Element*; it turns round: And conſequently wreſtles to get at a diſtance from the Centre of the *Vortex*, in which it is; in making that Attempt to deviate from the Centre of the *Vortex*, it forces the Matter of the *ſecond Element* to circulate, that poſſeſſes all the Circumference, and ſhoves and puſhes it every way imaginable, ſince there is not a point in the Circle that the Matter of the *firſt Element* deſcribes, in its Motion, wherein it does not ſtrive, to make its eſcape from the Centre, and by Conſequence does not preſs againſt the *Balls* of the *ſecond*. Imagine then you and your Body were in ſome part of the Circumference of the *Vortex*, and that you caſt your Eyes towards the Centre. There are an abundance of Lines of the Matter of the *ſecond Element*, that terminate in the bottom of your Eye. How comes that to paſs? Why the Lines are driven towards the Circumference, and conſequently forced againſt the bottom of your Eye, by the ſubtil Matter, that is, at the Centre, and is indeavouring to make its *Exit*. Being thus puſht it preſſes upon the bottom of your Eye; preſſing it in that manner it ſhakes the Strings of the Optick Nerve, and from this quavering follows the perception of the Object; and this is one of the moſt curious *Phænomena's* of my *Phyſicks*, where I maintain that the Nature of Light conſiſts in that reſtleſs indeavour of the ſubtil Matter to remove its ſelf from the Center of the Vortex, whence ſucceeds that



that preſſure which cauſes the moſt delicate and admirable Senſation that we have.

He then went on in explaining to me all the Properties of Light, and the Demonſtrations he hath given concerning the Reflection and Refraction of its Rays. He was very large and copious upon that Subject: For that piece of his Philoſophy, together with that where he explains the *Phænomena's* of the Loadſtone, is his darling and beloved Theam. I ſhall not deſcend to the Particulars of that Diſcourſe, for fear of wearying my Reader, as alſo frightning ſome, to whom Lines croſſing one another with A. B. C. are as terrible as Magick, and the ſight thereof enough to make them ſhut the Book, and never open it after. And this is the Reaſon I will make uſe of them as little as poſſibly I can.

He would not for any thing whatever have forgotten to remark to me thoſe little channel'd Parts,

Parts, whoſe Service is ſo very neceſſary to him, nor the way that they are wrought. Amongſt the Parts of the *firſt Element*, which are made of the *filings* of the *Second*, there are ſome, that by reaſon of their irregular Figure, are not ſo rapid as the other. Thoſe of this Nature eaſily hook themſelves together, and make up little Bodies larger than the other parts of the *firſt Element*; and as in their turning about, they are often obliged to paſs betwixt the Balls of the *ſecond Element*, they accommodate themſelves for that Paſſage, and as they ſqueeze betwixt them, wrythe themſelves into the Shape of a *Skrew*, or become like little Pillars chamfer'd with three Furrows, or gutterwork'd and tourn'd as you ſee the Shell of a Snail. They are chiefly to be found toward the Poles of the *Vortex*, having their Determination toward the Centre. Now whereas ſome of them enter by way of the Northern Pole, others by the Southern, whilſt the *Vortex* turns upon its *Axis*; it is apparent to every *Carteſian*, that thoſe which proceed from the North-Coaſt muſt be turned Shell-wiſe a different way, from thoſe that proceed from the South. An Inſtance *M. Deſcartes* took care to inculcate throughly in me: For it is principally upon that, the Power and Vertue of the Loadſtone do depend: But it ſhall not be long, *ſaid he*, before you ſee ſome particular Effect of theſe little channel'd Parts. *Numb.* 90. *Numb.* 91.

Take notice, ſaid he, how things go in that *Star* that's next you. How ſome of the chamfer'd Parts that come fromward the *Poles* of their *Vortex*, mingle themſelves with the Matter of that Star, and not being able to keep pace with it in Motion, are thrown out of the Star;

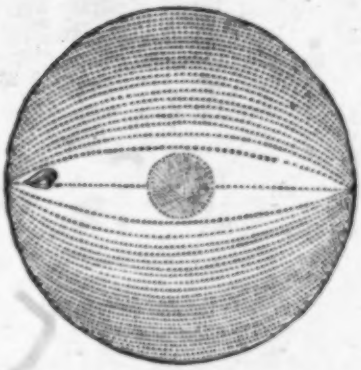
Star; juſt as the ſcummy Parts of a boiling Liquor are ſeparated from the other, and riſe above the Liquor. See how they link themſelves to one another, and by that Union loſe the quality of the *firſt Element*, and take on them that of the *third*. Upon their gathering and condenſing in a very great quantity, it is manifeſt they muſt hinder the action of the *firſt Element*, whereby it puſhes the *Balls* of the *ſecond Element* to the Circumference, and conſequently muſt interrupt that Motion and Preſſure in which *Light* conſiſts. And now you may ſee exactly what thoſe Stains are which you ſometimes diſcover on the Face of the *Sun* of your World. They are nothing elſe but the droſſy and ſcummy Parts of the *third Element*, gathered in Heaps and expanded on its Surface.

Fig. Seq.

Now the wreek and ſcattering of thoſe Stains which are ſtill a gathering, and as eaſily diſſipanated, diffuſing it ſelf far and near throughout the Circumference of the *Vortex*, will conſtitute a thin and rarify'd Body, like the *Air* about your *Earth*, at leaſt, the fineſt part of it; and I have formerly obſerved, that that of the *Vortex* of your Sun is extended as far as the *Sphere* of *Mercury*.

Numb. 92.

Whilſt



Whilſt *M. Deſcartes* was thus buſied in diſcloſing to me all his Myſteries, *Father Merſennus* and the *old Gentleman* were diverting themſelves, by Vaulting from *Vortex* to *Vortex*, and were but very ordinary Company to *Ariſtotle's Plenipotentiaries*, who ſtar'd confuſedly, and were exceedingly out of Countenance, and who now, and then joyned them, now and then came to us; comprehending not a Syllable all the time, in that Galimauphry of *Vortexes*, of the *firſt*, *ſecond and third Element*, of *ragged* and *branched Parts*, &c. for having only *Peripatetick* Ideas they ſaw not ſo much as a Pins Head of all we ſaw in that immenſe Space: And they were much ſurprized to hear us entertain our ſelves ſeriouſly, with ſuch idle Fopperies and *Chimera's*; for ſuch they reckoned all we ſaid, ſo far as to believe we meerly deſigned it to expoſe and banter them; and doubtleſs they had highly re-

reſented it, had not *M. Deſcartes* foreſtall'd them, by telling them, ſeparate Spirits conceiv'd things only in reference to ſome principal Ideas they had formerly been poſſeſſed with; and as they ſaw no *Matter* in the *Space* where we moſt diſtinctly beheld it, ſo he himſelf with all the Eyes in his Head, was never able to perceive *ſubſtantial Forms* in *Bodies*, *abſolute Accidents* and *intentional Species*, though at the ſame time the Peripateticks talkt of them, as Things they ſaw as clear as the Noon-day.

Mean time of theſe Occurrences, the *old Gentleman* in haſte, came and acquainted *Deſcartes*, That on that Coaſt he had been on, there were three or four *Vortexes* that began to jumble and fall to Loggerheads; and that if he did not ſpeedily come and part them, there needed nothing more to tear and ſhatter all his World in pieces.

Poor honeſt old Gentleman, ſaid *M. Deſcartes*: That which makes him ſo ſolicitous for my World, is one of the fineſt *Phenomena's* that can poſſibly be ſeen, and by which I'll demonſtrate to you how *Comets* are begot in *yours*; and how, in time, a *fix'd Star* may become a *Planet*. Let us go and cure him of his Fears.

When we came there we found *two Stars*, whoſe Surface was almoſt wholly overgrown with Scurf, and whoſe *Vortexes* began to be drain'd and ſuckt up by thoſe round about them. If you have read my *Book of Principles*, and my Treatiſe concerning Light, ſays *M. Deſcartes* to me, you will eaſily conclude in what this little buſtle and diſorder ought to end; and I ſtrange, ſaid he to the *old Gentleman*, you ſhould be frighted at it. Call to mind then what I

there

there teach, how that which preſerves a *Vortex* in the midſt of ſeveral others, is that impulſe caus'd by the Matter of the Star in its attempt to obtain a remove from the Centre towards the Circumference: For the Star, by that Impulſe, puſhing and ſupporting the Matter of its *Vortex* keeps the other Vortexes within their Bounds, and loſes no Ground in the Dimenſions of its Circuit. For, we muſt conſider all theſe *Vortexes*, as ſo many *Antagoniſts* that diſpute it to an Inch, and ſo long as their Forces are equally match'd, gain no Advantage over each other; but as ſoon as one of them is any ways weakned or diſabled, it becomes a Prey to all the reſt, each taking in a part of its Space, and at laſt uſurping it all. Now when a *Star* begins to be over-run with this Scurf, and cruſted with a maſs of the parts of the *third Element*, it can no longer puſh with ſo much force as it did before, the Matter of its *Vortex* towards the Circumference; and then the other that ſurround it, and whoſe Matter is indeavouring to get as far as poſſible from its Centre, finding no longer ſo much Motion, nor by conſequence ſo much Reſiſtance, expatiate and ſtretch themſelves out, and oblige the Matter of that impoveriſht *Vortex*, to circuit along with them, and by little and little each Inrich themſelves. In ſo much, that ſome Moments hence, you ſhall ſee thoſe *Vortexes* increaſe their Circumference with the Spoils of this poor *Vortex*, till at laſt they come to the *Star* it ſelf, which will be made their Sport: That is to ſay, it will deſcend towards the Center of ſome one of thoſe *Vortexes*, there to continue in the quality of a *Planet*, to turn with that Vortex, and to obſerve the Motions

tions of the conquering *Star*: Or it will becon-ſtrain'd by the Motion that ſhall be given it, to bound from *Vortex* to *Vortex*, and to make a long Pilgrimage in Habit of a *Comet*, until its Cruſts ſhall break: And then perhaps it will recover the eminency of a *Star*, and will take its revenge on ſome other, by appropriating its Vortex to its ſelf.

We waited then ſome Moments, and ſaw happen what *M. Deſcartes* had foretold; all the the *Vortex* was drain'd dry, the Matter of one of the neighbouring *Vortexes* ſurrounded the cruſted Star, and influencing it with a violent Motion, carried it clever off: But ſince that Star, by reaſon of its Solidity, that conſiſted partly in its Figure, moſt proper for Motion, partly in the cloſe Connexion of the Parts of the third Element, that cover'd it, and the paucity of its Pores in the Superficies: I ſay, ſince that *Star*, by reaſon of its ſolidity, was capable of a far greater Motion than the Maſs of Celeſtial Matter that incompaſs'd it, and carried it along; having by degrees arriv'd to a mighty Speed, in the turning of a Hand it gain'd the Brink of the Circumference of the *Vortex*, and out it flew amain, and continuing its Motion by the *Tangent* of the *Circle* it had begun to deſcribe, paſs'd on to another *Vortex*, and from that to another, till I knew not what became on't: For *M. Deſcartes* interrupted the Attention I was in to purſue it, to inſtruct me, That the Adventure I had ſeen at preſent uſually happen'd, and would ſtill from Time to Time in our World: And that what we there call Comets, were nothing elſe but Stars that have loſt their *Vortex* and Light by that congealing Matter, and then paſs'd from *Vortex* to *Vor-*

tex,

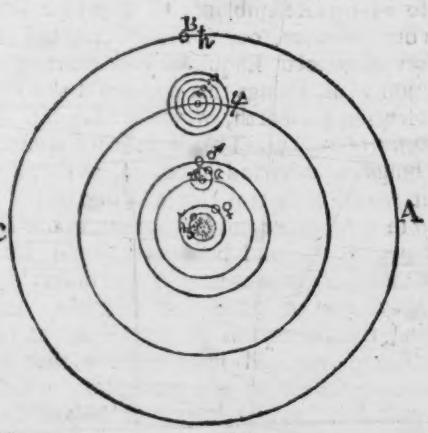
tex, becoming visible to us all the Time they traverse our *Solary Vortex*, and ceasing to be seen as soon as they entred in another. *V. Fig. Vort.*

Immediately after the Ruin of the *Vortex* I have been speaking of, there were seven others that ran the same Risque, and became seven Comets. Whereupon *Monsieur Descartes* pursu'd: It is not amiss, in order to your better understanding the Effects that are speedily to follow, to give Names to the Principal Stars that are left: We have still a dozen of them, but we will trouble our Heads at present with no more than eight. That then, continued he, pointing out the greatest *Star* of all, and which had the greatest *Vortex*, we will call the *Sun*; that other shall be *Saturn*; let the next on the Left-hand be *Jupiter*; that on the Right shall be named *Mars*; that other wee'll name *Earth*; and the nearest to us of all shall be christned the *Moon*: Of these two little ones, the one shall be *Venus* and the other *Mercury*. By and by I will name the other four. Having for some Time consider'd the admirable Disposition of all these *Vortexes*, that, in spite of their Fluidity, did not at all mix and incorporate with one another, a thing no one would believe unless he saw it, and which cannot be comprehended but by a *Cartesian* Soul; for no other Philosopher 'till this Day hath been able to conceive it possible. We saw *Mercury* and *Venus* begin to be overspread with the rising Scum, and forthwith the *Vortex* of the *Sun* with the other neighbouring Vortexes to get ground prodigiously on those two Stars, till at last their Heaven or their *Vortex* being entirely swallow'd up, they fell in with that of the *Sun*, somewhat near the Centre, and

began to turn about him, floating in the Matter of his *Vortex*. The ſame thing happen'd a little while after to four petty *Stars*, whoſe *Vortexes* border'd upon that of *Jupiter*, where they were oblig'd to deſcend, and take the ſame Lot therein, as *Venus* and *Mercury* in that of *Sol*. *M. Deſcartes* called theſe four the *Satellites* of *Jupiter*, becauſe they repreſent the four *Planets* that turn about *Jupiter* in our World. Laſtly, the *Earth* in like manner made herſelf *Miſtreſs* of the *Moon*, and obliged her to attend her in quality of her *Planet*; for that is the Name which is given to degraded *Stars*, becauſe of their only Employment that is left; which is, to wander in the *Zodiac*, and to turn eternally about thoſe that have rob'd them of their *Vortex*.

That which diſtinguiſhes their Condition from that of *Comets*, is nothing but the Difference found betwixt the Solidity of one and the other; for as they are leſs ſolid than the *Comets*, in entring the *Vortex* that receives them, they are not agitated in their Turning with ſo ſtrong and violent a Motion, as to toſs themſelves out of the *Vortex*, but ſwim with the Current of Celeſtial Matter in which they are plung'd. In like manner, the Diſproportion of Solidity that is betwixt many *Planets*, carried in the ſame *Vortex*, is the cauſe that ſome remain more remote from the Centre or Star, and others approach nearer to it; for a *Planet* deſcends towards the Centre, as long as the Celeſtial Matter that's below it, is better able to mount farther from the Centre, the one neceſſarily following the other, according to the Laws of Motion. Thus, becauſe *Mercury* was leſs ſolid than *Venus*, he came nearer to the *Sun* than ſhe; and the Celeſtial

ſtial Matter that's above him, forc'd him to that deſcent, becauſe it had more Strength than he to get at a Diſtance from the Centre, and it oblig'd not *Venus* to ſink ſo low, becauſe the Ballance betwixt it and *Venus* was equally pois'd, the one having neither more nor leſs Power to deviate from the Centre of their Motion than the other. But as it ſometimes fortunes in *our World*, that *Petty Princes* making War with one another; after having fought ſome Time, and the *Conquerors* as well as the *Conquered* drain'd themſelves of Men and Mony, a common and powerful Enemy comes thundring upon them, and devours them all: So here happens a ſudden Revolution in *M. Deſcartes*'s *World*, that reduc'd *Jupiter* and the *Earth* to the ſame Condition they had reduc'd the other Stars, whoſe Vortexes they had demoliſh'd: Both the one and the other



no leſs than *Mars* and *Saturn* became *Planets*, and the Sun, the ſole and univerſal Conqueror, extended his Vortex over all the Space the other had poſſeſs'd before, and conſtrain'd them all to turn about himſelf.

M. Deſcartes exemplify'd this Matter by certain *Whirl-pools* we ſometimes ſee in Rivers, whereof one *great* one, that often contains in it many *little* ones, repreſents the great *Solary Vortex*, and the *little* ones repreſent the *Vortexes* of *Jupiter* and the *Earth*. Thoſe little Whirl-pools are carried along by the Motion of the greater, and turn about its Centre, whilſt themſelves make every thing that comes in the Reach of their Circumference, ſuppoſe Straws, or little Chips, to turn about their own: Thus the *Earth* carries round the *Moon* in her *Vortex*, and *Jupiter* his *Satellites* in *his*.

Having ſeen ſo many fine diverting Sights, and ſo near a Reſemblance of this *little World*, with our *great one*, our Curioſity tempted us to a more particular Enquiry, and thorough Inſtruction in all Things that concern'd the Planet repreſenting the Earth, which we inhabit. But *M. Deſcartes* told us, That in caſe we would ſee all Things in Order and Succeſſion, as they ſhould be, it would be ſeveral Hours Work to put that *Planet* in the Poſture and Circumſtances our Earth is at preſent in, and beſides we ſhould ſee nothing more occur in it than he had obſerv'd, in the *fourth Part* of his *Book of Principles*, in deſcribing the Formation of the *Earth*, as he at that Time conceiv'd it. Beſides that *Subtil Matter*, whereof it was compos'd, whilſt it was yet a *Star*, which Matter is lodged in the *Centre*, and beſides that *Shell*, infinitely hard, that

that dams it in, I conceiv'd, *said he*, a kind of *third Region*, constituted of the Parts of the *third Element*, not very strictly united: And I yet farther divided that *third Region* into *three Stories*, before I imagin'd to my self the Earth in the Capacity it has at present, and in which I am going to put my own.

I *The Centre of the Earth, full of the Matter of the First Element.* M *the internal Shell that covers it.* C *the Place of Metals.* D *Water.* E *Earth, on which we tread.* V *Air.*

The *lowest* of these *Subordinations* was, according to my Position, an Arch of very Solid and Heavy Matter, and there I place the origin of *Metals*. The *Second*, which I rang'd above it, was a Liquid Body, constituted of the Parts of the *third Element*, pretty long, very flexible and pliant, as it were little Eels, temper'd with an abundance of the Parts of the *second Element*, which was nothing else but what we usually call *Water*. Lastly, above all this I suppos'd a *third Vault*, made of the most clinging and craggy Parts of the *third Element*, whose sensible Parts

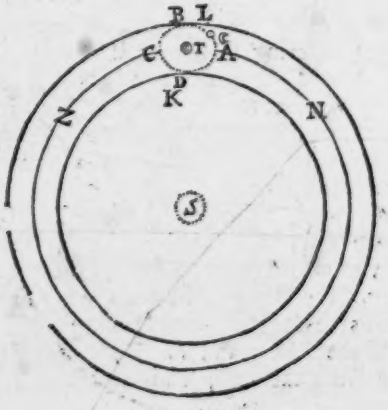
were only Stones, Sand, Clay and Mud, and which was very porous: And this is the outward Surface of the Earth, on part of which tread Mortal Men.

Next, I explain'd, how in that *upper* Vault of the *Earth*, by its being expos'd to the conſtant Beating of the *two firſt Elements* againſt it, that ruſh'd through its Pores with Violence; there were made a World of Crevices and Chinks, which being in Time inlarg'd by little and little, its ſtructure at laſt, all of a ſudden fail'd, and broke in Pieces; whereupon its Ruins fell in part of the Water below it, of the *ſecond Story*, and forc'd it above them, becauſe it was leſs weighty; and that's the *Water* which conſtitutes the *Seas*. Some Parts of the Vault were ſtill upheld, and remain'd ſuſpended, as it often happens in the downfal of great Buildings; theſe were not drown'd, and they were theſe that made the *Plains*, and level Parts of the Earth. Laſtly, ſome Pieces, as they fell, were ſhelv'd and ſupported againſt one another, and raiſed above the reſt; and thus came the Inequalities of the Earth, which we call *Mountains*.

You plainly ſee then, ſaid *M. Deſcartes*, that to ſhew you the Train of all theſe Things would demand a great deal of Time: But the Hour of your Departure haſtens on, I remit you therefore to my Book for Satisfaction in all thoſe Particulars. I am going now to make an Abridgment of all thoſe Motions, and to ſhew you in as little Time as we are ſpeaking on't, this Earth, exactly like yours, with Mountains, Valleys, Plains and Seas. No ſooner ſaid than done: He falls to determining the Motion of an infinite Number of thoſe long and flexible Parts of the *third Element*, and agitating them, by playing among them the Parts of the *ſecond*, in the ſeveral Places, where he had heap'd them to gether, we ſaw preſently a kind of Sea diffuſe itſelf over the Face of the Earth; it was a leſs Trouble to him to raiſe Mountains, by only amaſſing together an abundance of the *branchy* Parts of the *third Element*, and cauſing them to link and graple with each other, whereby there ſtood in many Places great and mighty Piles, nothing differing from our *Mountains*. That Earth look'd very bare and naked, without Trees, without Herbs, without Flowers; for to produce all thoſe Things that are the greateſt Ornaments to our Earth, was a Buſineſs that would take up longer Time.

This done, he employ'd the reſt of the Time that we ſtaid with him, in the conſideration chiefly of two Things: Firſt, of the *Gravity*, or rather of the Motion of Bodies we call Heavy, towards the Centre. And ſecondly, of the Manner of the *Ebbing* and *Flowing* of the Sea. He began with the firſt, and explained it at this rate.

Take notice, *ſaid he*, that this Earth turns upon its *Axis* in its *Vortex*; it has not that Power of Moving of itſelf, but it is carried about by the Stream of the Celeſtial Matter that ſurrounds it, which whirling with a more rapid Motion than the *Earth*, ſpends the overplus in making other Motions in all Parts, and eſpecially in ſqueezing and preſſing Terreſtrial Bodies againſt the Earth; a Preſſure ſo neceſſary, that take it but away the whole Earth would crumble all in Pieces, and all the Men and Animals on the Surface of the Earth of your World would be hurl'd into the Fluid Space, according to my grand Principle of Motion; that every Body that turns circularly, as does the Earth with all that is upon it flies fromward the Centre of its Motion, if not prevented by the other Bodies that keep it in, as does the Preſſion of the Celeſtial Matter.



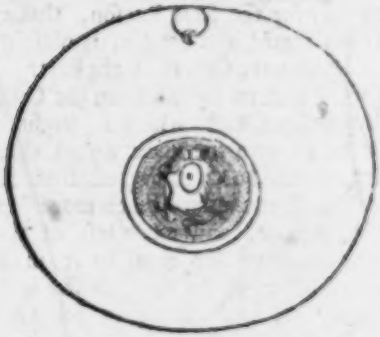
S *the*

S *the Sun.* T *the Earth.* A B C D *the little Vortex of the Earth.* N A C Z *the great Orb wherein the Earth is carried round the Sun.*

And it is for the ſame Reaſon, that a Terreſtrial Body forc'd into the Air, is oblig'd to deſcend towards the Centre of the Earth, becauſe it has leſs Force to digreſs from the Centre than has the Maſs of Air, which it ought to diſmount to get into its Place: And the Reaſon why it hath leſs Force to digreſs from the Centre is, becauſe it contains much more Matter of the *third Element*, and much leſs of the *ſecond* than the Maſs of Air equal to it in Bigneſs. Now the Matter of the *third Element* is dull and more unactive, and unable to get rid of the Centre, than the Matter of the *ſecond*, it muſt therefore deſcend. Your *Peripatetick* Quality, *continu'd he*, and *Democritus*, and *Gaſſendi*'s Chains made of link'd *Atoms*, are not worth a Straw, in compariſon of what I ſay, and with that he caſt a Stone on high, to ſhew us by Experience the Truth of what he had been Teaching.

The next thing was the *Flux* and *Reflux* of the Sea: For the better underſtanding this, he bade us firſt conceive, That the *Vortex* of the Earth was of an oval Figure. Secondly, That that of its *Diameters*, in which was the *Moon*, both in the *New* and in the *Full*, was the leaſt of them all. Thirdly, That the Centre of the *Earth* was not the Centre of the *Vortex*, but was a little diſtant from it, 'cauſe of the *Moon*, that in whatever Part of the Circumference ſhe was found, made the Space betwixt her and the Earth more ſtrait; and by conſequence hindred the

the Celeſtial Matter from flowing in ſo free a Courſe betwixt



1 *The Figure of the Vortex of the Earth.*

them; and hence it follows, That the *Earth*, whoſe Place and Station, is no otherwiſe determin'd, than by the Equality of Oppoſition, that preſſes it on every Side, ought to recoil a little towards that part of the *Vortex* that is oppoſite to the *Moon*. Fourthly, Whereas the Celeſtial Matter, that circuits with far greater Speed than the *Earth* and *Moon*, muſt find the Paſſage that lies betwixt them very narrow, in compariſon of that Liberty and Room it had before, it muſt inevitably flow more rapidly in that Place, and at once preſs more violently upon the Air and Water: And to conclude, there ought to be an almoſt equal Preſſure in the oppoſite Part of the *Vortex*, by the ſame reaſon of that Recoiling of the *Earth*.

He

He made us forthwith acknowledg the Truth of all thoſe Principles and Effects that naturally follow them; for upon his placing the *Moon* perpendicular to the *Equator* of the Earth, we immediately ſaw firſt the Sea preſs'd by that Matter to ſink lower, and its Waters thus preſs'd and crowded hurry towards the Poles, and ſpread themſelves ſucceſſively on the Shores, proportionably to their Diſtance from the *Equator*. 2. The Terreſtrial Globe rowling on his Axle from Weſt to Eaſt, we beheld the Preſſure of the Moon to light on ſeveral Places after one another, according to the Succeſſion of *Meridians*. 3. That ſucceſſive Preſſure of the different Parts of the Sea had this neceſſary effect, *viz.* to cauſe it to ſwell and fall in ſeveral Places, according to the plain and evident Rules of *Staticks*, which gave us a moſt exquiſite and natural Idea of the *Flux* and *Reflux* of the Sea, conſiſting in this, that by how much it is mounted, by ſo much it is depreſs'd, and as often as it mounts in one Place it is depreſs'd in another; all theſe Motions going on regularly after each other, and being ſet, and punctual, as to Space of Time.

Again, ſince the *Diameter* of the *Vortex*, wherein this little *Moon* muſt neceſſarily be in its Conjunctions and Oppoſitions, was the leaſt of all; and on the contrary, that in which it would be found in its *quadratures* the greateſt, it was evident to us, that the depreſſion and ſinking of the Waters muſt be far greater in the *Conjunctions* and *Oppoſitions* than in the *Quadratures*, and conſequently that the Sea muſt flow with greater impetuoſity and Vehemence towards the Shore, or which is all one, that the Tides be far greater in

in the *New* and *Full* Moons than at any other Time, and in the *Equinoxes* than in the *Solſtices*, as it really happens in our World.

He next obſerv'd to us the particular Phenomena's of the *Flux* and *Reflux*, founded on the ſame Principles, and minded us eſpecially of the Reaſon, why we never ſee any Ebbing and Flowing in Lakes and Ponds, let them be never ſo great, unleſs they have ſome Communication with the Sea: For if, ſaid he, thoſe Lakes and Ponds be beyond the *Tropicks*, they are never at all preſs'd by the *Moon*; and for thoſe that are under the *Torrid Zone*, within the *Tropicks*, they take not up a compaſs of Ground, enough to cauſe that one Side of their *Superficies* ſhould be more preſs'd than the other by the *Globe* of the *Moon*. Now that Inequality of Preſſure is the only cauſe of that Viciſſitude of Motions, which we call the *Flux* and *Reflux* of the Sea.

I was wonderfully taken with this Explication, and that way of ſolving the Flux and Reflux is ſo handſome, that thoſe that demonſtrate to *M. Deſcartes* the *Earth* cannot have a *Vortex*, at leaſt an Oval one, ought upon that Conſideration to ſhew themſelves a little merciful to him: *But theſe Philoſophers are a very ungentile and brutiſh ſort of Creatures, and know not what it is to be generous towards their Adverſaries.*

Mean while all the other Motions were perform'd in the little World with all poſſible exactneſs, *Mercury*, *Venus*, *Mars*, and the reſt of the Planets, having once obtain'd their Poſt in the *Vortex* of the Sun, were extraordinary punctual to their Courſes. He began to exhale Vapors, and to form them into Clouds, about the little *Earth*. To ſay no more, I was charm'd

with

with all these Prodigies: But we must now resolve on our Departure, and 'twas high Time we were a going. It was well-nigh four and twenty Hours since we left the Earth, and *M. Descartes*, who, as I have noted before, disapprov'd of their Conduct that deserted their Body before *Death*, and the Orders of the *Sovereign Being*, had dismiss'd them, advis'd us himself to defer the entire Satisfaction of our Curiosity till another Time. I made him a courteous Acknowledgment and Resentment of his Favours, assuring him of the vast Esteem I had both for his Person and Doctrin. I beg'd the Favour of proposing to him the Scruples that might occur hereafter upon his *Philosophy*, whenever I had an Opportunity of sending a Letter to him. He express'd on his Part a World of Kindness for me, exhorted me to a most sincere and hearty Love of Truth, and presented me with two *Hyperbolical Glasses* to make me a Perspective Glass, wherewith, he assur'd me, I might stand on the Earth, and discover all the Curiosities of the *Globe of the Moon*, and the Animals themselves, if there were any. He hath demonstrated in his *Dioptricks* the Excellence of that Figure, for the Glasses of a *Telescope*, beyond all other. He endeavour'd to have them made in *Holland*, and contriv'd an Engine for that Purpose, but he could not find Artists capable of accomplishing his Design and his Idea with that Exactness as was necessary. He brought us on our Way as far as the *second Heaven*, which is that of Stars, and left *Father Mersennus* with us, to conduct us Home.

Let. de Descart.

Some

Some distance from the Stars, *Aristotle*'s Embassadors meeting some Philosophers of their Country and Acquaintance, desir'd us not to take it amiss, that they accompanied them, and took their Leave, but indifferently satisfied with their *Voyage* and Negotiation. Seeing we were in great haste, we stay'd no where on the Road, and avoided all Harangues and Disputes with every Person whatsoever, though we met in diverse Places very many Spirits, that would willingly have joyn'd Discourse with us. *Father Mersennus*, as we pass'd along, made me observe the Disposition of the *Vortexes*, and the situation of the different Elements that compos'd them, and especially the Balls of the second Element, that I had no Apprehension of so long as I was stock'd with *Peripatetick* Notions, but that I saw take up the greatest part of the Universe, since I was turned *Cartesian*. In less than six Hours Time we arriv'd at my House, where there fell out a most unfortunate Disaster; for in pitching with a most violent descent, and not considering the Glasses I had with me, as I pass'd athwart my Chamber-wall, and my Glasses in *Bodily Quality*, could not enter, they were stopt, and dash'd in a thousand Pieces, by the reason of the unaccountable Swiftness wherewith they flew against the Stones; and thus I was depriv'd of the Pleasure of making the Experiment, that *M. Descartes* had warranted, of seeing from our Earth all the Occurrences in the *Globe* of the *Moon* as distinctly as if I was personally there.

I found my Body somewhat fainty and very feverish, by the reason of a Fast of above thirty Hours. Before I entred I would have persua-

ded

ded the little *Negro* to reinſtate my Brain in its *Quondam*-capacity, fearing leſt he had unhing'd ſome *Clock-work* there: For that there muſt be ſomething more than ordinary in that *Machine*, to cauſe ſuch prodigious Alterations in the Soul of Man; and I had been very finely ſerv'd, if having been reunited with my Body, I had found my ſelf a Fool; but the little arch *Devil* of a *Spirit* refuſed to do it, telling me withal, That I was highly oblig'd to him, for ſetting me right in my Ideas. I muſt therefore venture on't for better for worſe; ſo that having thankt *Father Merſennus* and my *old Gentleman*, for the favour vouchſaf'd me by their Company in ſo fine a *Voyage*, my Soul entred her Body, and fail'd not in quality of a *Carteſian* Soul, to ſeat her ſelf in the Pineal Gland of my Brain.

I had requeſted Father *Merſennus* to oblige me ſo far as to ſee me again before he return'd to *M. Deſcartes*'s World, that I might convey a Letter of Thanks by him to that great Philoſopher, that had treated me ſo generouſly and gentilely. He promiſed me he would, and accordingly returned at a Months end, which he ſpent partly in the World, in diſpatching ſome Commiſſions of *M. Deſcartes*, partly in the ſeveral Planets and different Places of the wide Space, which he travers'd in ſearch of ſome old *Carteſians*, on that Philoſopher's Account, to inform them of his Place of Reſidence, and of the grand Deſign he was ready to put in Execution. I gave him the Letter, which I have joyn'd to this Relation, and with which i'll finiſh it.

A VOYAGE TO The World of Cartelius.

PART IV.

MY *Soul* thus ſeated on the *Pineal Gland* of my Brain, as a *Queen* upon her *Throne*, to conduct and govern all the Motions of the *Machine* of my Body, was extreamly pleas'd with the change of her Ideas; and complimented her ſelf with the honourable new Character of *Carteſian*, wherewith I began to be diſtinguiſht amongſt the Learned. I found my ſelf immediately diſpos'd for the Humour and Spirit of that Tribe of Philoſophers; and could not mention, without diſdain, the *Philoſophy* of the *Colleges*, good only, ſaid I, to corrupt the Mind, and fill it with

with empty and confus'd Ideas, and fit for nothing but to entertain the vanity of a Pedant. *Deſcartes* was the firſt, and indeed the only Philoſopher, the World has ever known; the reſt in reſpect of him were mere Children Wranglers and Legendaries. Being invited ſome days after to a *Theſis* of Philoſophy, it cannot be imagin'd what Violence it was to me to reſolve to go. I could not forbear gaping all the while I ſtaid, looking down from the exaltation of my Soul, with pity on all I heard. One of the firſt things I did, was the degrading the *Suarez's*, *Fonſeca's*, *Smigletius's* and *Goudin's*, &c. in my Library, caſhiering them of the conſiderable Poſt they held, and abandoning them to a mouldy Cheſt of Lumber, there to lye at the Mercy of the Duſt and Vermin, to be ſucceeded by *M. Deſcartes*, bound in a fine Turky Cover, and all his illuſtrious Diſciples.

Before my Converſion to *Carteſianiſm*, I was ſo pitiful and Tender-hearted, that I could not ſo much as ſee a Chicken kill'd: But ſince I was once perſuaded that Beaſts were deſtitute both of Knowledg and Senſe, ſcarce a Dog in all the Town, wherein I was, could eſcape me, for the making *Anatomical* Diſſections, wherein I my ſelf was *Operator*, without the leaſt inkling of Compaſſion or Remorſe; as alſo at the opening of the Diſputes and Aſſemblies of the Learn'd, which I thought good to keep at my Houſe, for the inhancing and propagating the Doctrin of my *Maſter* in the Country; the firſt Oration I made before them, was an Invective againſt the Ignorance and Injuſtice of that Senator, the *Areopagite*, that caus'd a *Noble Man's* Child to be declar'd for ever Incapacitated from

entring on the Publick Government, whom he had obſerv'd take pleaſure in pricking out the Eyes of Jack-Daws, that were given him to play with.

Notwithſtanding, I muſt ingenuouſly confeſs, that as reſolv'd a *Carteſian* as I was, I was not inſenſible of ſome weighty Scruples, the more Ingenious ſort rais'd in me, in our Conferences. I perceived alſo that the farther I went, the more they increas'd, and if *M. Deſcartes* does not ſettle and compoſe the Fluctuation of my Mind, by a juſt and clever Anſwer to the Letter I have wrote him on that Subject, I have great Fears the Traces of my Brain will change, and the Animal Spirits reſume their wonted Current. This is the Copy of the Letter I ſent to *M. Deſcartes*, that contains the principal of thoſe Difficulties, which I thought not unworthy of the Publick.

A Letter to M. Deſcartes.

Monſieur,

I Cannot ſufficiently expreſs my Acknowledgments, of the Honours and Civilities I receiv'd from you, during that tranſitory Stay I made in your Parts of the *higheſt Heavens:* The few good Qualities and Accompliſhments, you muſt neceſſarily find in me, prevented not your treating me as a Perſon qualify'd with the greateſt Merit. For you to build an intire World before my Face, and to give your ſelf the trouble of making me comprehend the whole Contrivance, to ſee all the Wheels and Springs of ſo

so admirable a *Machine*, was an Honour greater in its kind, than what the *King* vouchsafes *Embassadors*, *Princes* and mighty *Personages*, by commanding all the Water-works to be play'd for them at *Versailles*. You may infallibly reckon from that time, that I am devotedly at your Service; and that having made your self absolute Master of my *Understanding*, by those sublimated Notices you have communicated, you have yet more irresistibly captivated my *Will*, by those extraordinary Favours you have heap'd upon me.

The Reverend Father *Mersennus*, who readily condescended to the trouble of this Letter, will inform you more at large, both what my real Sentiments are of your Person and your Doctrin. My Behaviour, since my return, hath throughly convinc'd him, that there never was a Disciple more Zealous than my self, for the Honour, Growth and Advancement of the Sect. In less than a Month, since my Arrival from your World, I have cast Terror and Confusion in the Face of *Peripateticism* throughout the Land. I have inspirited with new Life and Courage, those few drooping *Cartesians* that remain'd, but liv'd in Obscurity and Silence, solacing themselves with the private enjoyment of Truth, but were very remiss in promoting her Interest there, where she had been but ill receiv'd. Twice every Week I hold publick Disputes at my House, and indeavour therein, as much as possible, to give Vogue and Reputation to your Doctrin; I have already made some Conquests among the *Peripateticks*, many whereof appear there, and excepting two or three, who are ungovernably headstrong and conceited, they will

all be my own, as ſoon as I ſhall have anſwer'd ſome pretty ſubſtantial Objections, they have propos'd againſt ſeveral Points of your Philoſophy. The chief of which reſpect the general *Conſtruction* of your *World*. And whereas in that Affair, they pretend to deſtroy your Concluſions by your own Principles, and ſome amongſt them are Men of Parts, that give a ſpecious and probable turn to their Arguments, in ſo much that I have ſometimes been put to't to find the Fallacy, I thought my ſelf oblig'd to have recourſe unto the Oracle, and that I could do nothing better than conſult *You* your ſelf, as you gave me Permiſſion, and intreat you to communicate your Thoughts, as ſoon as poſſible thereupon. A Voyage from the *third Heaven* to this Place, is no great buſineſs for your little *Moor*. Thus then theſe Gentlemen, to my beſt Remembrance, fell to Work.

They began by propoſing two or three trite Arguments, daily made uſe of in the *Desks*, to confute your *Syſtem*; and to ſhew that it is a meer *Chymera*, and not to be ſuffered as a ſimple *Hypotheſis*, ſhould they grant the Principles you your ſelf lay down. *M. Deſcartes* (*ſay they*) ſuppoſes, firſt, That God creates Matter; ſecondly, That he divides it into infinite little cubical Parts; and laſtly, determining ſeveral great Portions of this Matter, he puts them in a circular Motion, and at once makes the little cubical Parts, of which the great Portions, call'd by him *Vortexes*, are compos'd, to turn about their proper Center. But it is impoſſible, they adjoyn, to conceive the *diviſion* and *motion* of Matter upon his Principles.

For

For as to the *diviſion*, it can be conceiv'd but by one of theſe two ways; either by ſuppoſing betwixt the Parts divided ſome empty Spaces, or imagining thoſe Intervals fill'd up with ſome Bodies or Matter of a different Nature from the Parts. And thus though Nature every where is full, we conceive four Dice laid cloſe to one another, as four diſtinct cubical Bodies; for though there is nothing of a void betwixt them, we yet perceive a little Interval fill'd with Air, that hinders our Conception of them, as of one ſingle Body: But by the Principles of *Carteſianiſm*, we can conceive it neither one way nor the other. For we muſt not ſuppoſe a Vacuity betwixt the Parts divided, ſince a *Vacuum* is utterly thrown out of that Syſtem. Nor is it eaſier to conceive a Body of a different Nature, ſince the diſtinction of Bodies, according to the Author of the Syſtem, is not to be conceiv'd, till after the agitation and motion of Matter. That diviſion therefore is an Abſurdity.

As to the buſineſs of *Motion*, that's in a worſe Caſe ſtill; for how is it poſſible to conceive that all thoſe cubical Parts, that are univerſally hard, impenetrable and incapable of Compreſſion, ſhould turn about their Center, and break in pieces, unleſs they find or make a *Vacuum*? For the diminutiveneſs of them will not help us out; ſince let them be as little as you can ſuppoſe them, they are ſtill hard and impenetrable as Adamant, and all combine together to deſiſt the Motion of each Particular. That *Hypotheſis* therefore is indefenſible, and *Deſcartes* his very firſt Suppoſition is deny'd.

These, *Monsieur*, were the first Passes these Gentlemen made at me, the first Blows I was to ward off, in the Defence of the *System of your World*. They had been taken out of the Books of very Ingenious Men; and whereas the Gentlemen, your Disciples (as if it was their Maxim and their Method, never to be put out of their own Road, which is barely to give an Exposition and a Proof of their Doctrin) trouble not much their Heads with Objections that are made them, since they are not oblig'd to the formal Answer of the Desk; these Arguments pass'd for unanswerable, and such as at the very entrance of Dispute baffled the *Cartesian*. But the more impregnable my Adversaries appear'd in so good Accoutrements and Arms, the more my Honour was advanc'd in disabling and disarming them.

As I had diligently read your Works, and above all, the Book of Principles, and that Intitled, a *Treatise concerning Light*, or *M. Descartes's World*, I answer'd the first Argument, by pleading a false Indictment charg'd on you, for making a distinction of Instants betwixt the *Division* and the *Motion*, as if you had held that God divided the Matter in one Instant, and mov'd it another: I said you never suppos'd that Matter was divided before its Motion: That the manner of proposing your System in the *third Part* of *Principles*, suppos'd no such distinction, and that in the *Treatise of Light*, where you describ'd the formation of the World, you said positively the contrary; advertising your Reader, That that Division of Matter consisted not in God's separating its Parts, so as to leave a Vacuity betwixt them; but that all the distinction,

ſtinction, you ſuppos'd God made in them, conſiſted in the diverſity of Motions that he gave, cauſing ſome from the firſt inſtant of their Creation to commence their Motion one way, ſome another; ſo that in this Inſtance Diviſion and Motion were the ſame Thing, or at fartheſt one could not be without the other. That you would be as forward as any of them to confeſs, That nothing was more abſurd, in reference to your other Principles, than to ſuppoſe the Parts of Matter ſtill and in Repoſe, and yet divided, ſince, according to you, the Union of the Parts of a ſolid Body, ſuch as Matter muſt be conceiv'd before its Motion, conſiſts in that Reſt they enjoy by one another: And farther, that it was full as eaſie to comprehend how Diviſion was made by Motion, and yet cotemporary with the ſame Motion, as to underſtand how I can tear a Sheet of Paper, by dividing it in two half Sheets, one whereof I hand towards the Eaſt, the other towards the Weſt. I hereupon produc'd the Books that I had cited, and ſhew'd them the very Places in diſpute: They were convinc'd by plain Matter of Fact, and had no more to urge againſt it.

But we had not ſo ſoon done with the Motion of Matter; we muſt neceſſary ſtill diſpute, tho' very calmly, without the leaſt Paſſion or wrangling, ſince the generality of thoſe I had to deal with were well bred, honeſt Gentlemen, that would ſubmit to Reaſon. The Queſtion was, to explain, how the Parts of Matter, which we conceiv'd ſo cloſely preſs'd againſt one another, as not the leaſt Interval was left betwixt them, throughout the Maſs, and which we alſo ſuppos'd ſolid, from a ſettl'd Reſt could skip into Motion.

After these Gentlemen had copiously discours'd upon the Subject, I ask'd them, If as stanch *Peripateticks* as they were, they were throughly convinc'd, that the Fluidity of Water, for instance, Was an *absolute Quality*, that when it was congeal'd it became Solid, by an *absolute Accident*, call'd Solidity, and that when it was dissolv'd, it became Liquid by an *absolute Accident* call'd Fluidity? That one of these Accidents made Lead run when heated, and the other fixed it when it began to cool? And on the contrary, if having read the Delicate Natural and Intelligible Way of *M. Descartes*'s explaining the Nature of Fluidity, and the Properties of Fluid Bodies, by the Motion of the insensible Parts of those Bodies (a Motion which the meer Dissolution of Salts in common Water, and of Metals in *Aqua Fortis* evidently demonstrates) they were not at least come over to us in that Point? The most of them answered, That as they were persuaded there was no doing without *absolute Qualities*, in the explication of an abundance of *Phenomenas*, that which they could most easily part with was *Fluidity*, and that they would not quarrel with me thereupon.

This suppos'd (*said I*) Gentlemen, you shall be speedily satisfied, or more perplex'd than *M. Descartes*; for in short, in your own *System*, the World is full, there's an Abhorrence of a *Vacuum* through the whole: Motion, notwithstanding, both is and does continue, the Sensible and Insensible Parts of Bodies are mov'd, nor does their Hardness and Impenetrability stop their Progress. Why may not *M. Descartes*'s Matter, that is no more impenetrable than yours, enjoy the same Priviledg and Charter? Why must

muſt his Motion be more impoſſible? both you and us ſuppoſe the ſelf-ſame Thing, and we have no more to do than defend our ſelves againſt the *Epicureans*, who think they demonſtrate by Motion, the Neceſſity of their little inſenſible Vacuities interſpers'd throughout all Bodies. Their pretended Demonſtration amounts to this; To the end a Body may move, it is neceſſary it diſturb another Body from its Place: That other cannot ſtir, becauſe it has not where to go, if all is full: Therefore Motion will be impoſſible, if there is no Receptacle or a *Vacuum*. On the other Hand, ſuppoſing a *Vacuum* among Bodies, they may be compreſs'd in leſſer Room, and conſequently may make Way for ſuch as preſs againſt them; and thus Motion will be made. This is a meer Fallacy of theirs, which both you and we can eaſily unriddle, by only telling the *Epicureans*, That to conceive how *Motion* is perform'd without a *Vacuum*, we need only underſtand, That a Body is never mov'd alone, but that in the ſame Inſtant one Body quits its Place, another crowds in and takes it: And when I conceive one Body may in the ſame Moment take the Place another Body leaves, I perfectly conceive Motion, for there lies all the Myſtery.

My *Peripateticks* ſeemed ſurpriz'd to ſee me come over them thus readily, with ſo neat a Concluſion, drawn from a Principle they had ſo freely granted me, and doubtleſs repented them of their Condeſcention: But I proceeded, by telling them, I ſcorned to take an Advantage over them from their Courteſie, though they were oblig'd to it by the Evidence of the Truth, and I was unwilling they ſhould reproach me,

as perhaps they did already in their Hearts, for having us'd Surprize, and abus'd their good Nature to inſnare them; and therefore I would endeavour by their own Principles to enforce to them, at leaſt the Probability of the Truth I was defending.

Gentlemen (*ſaid I*) there are Prejudices in the Caſe that we are upon, proceeding from the Imagination more than Reaſon: We imagine, in the firſt Place, That a Body which we fancy in the midſt of the Matter of the World, is far more preſs'd, if we ſuppoſe that Matter Solid, than it would be upon Suppoſition it were Fluid, which is manifeſtly falſe: For if the World be full, whether with Solid Matter or with Fluid, there is neither more nor leſs of it, but an equal Quantity in each Suppoſition; and conſequently its Parts are no more cloſe and crowded, ſuppoſing it Hard than if you ſuppoſe it Fluid. Again, we are apt to believe, That a Body, whilſt it is Liquid, is ever ready to give way to the Motion of another Body; and on the contrary, whilſt 'tis Solid, it is incapable of that Compliance, if incompaſſed with other Solid Bodies. The firſt is prov'd evidently falſe, by a very common Experiment: Fill a Glaſs Bottle with Water, whoſe Neck is long and ſlender, then turn the Mouth of it downwards, placing it perpendicularly upright, the Water by its own Weight is forc'd towards the Earth, it meets no other Body in its Way but Air, that is ſtill more Liquid than it ſelf; yet notwithſtanding the Gravity and Propenſity of the Water to put itſelf in Motion, notwithſtanding the Fluidity of the Air that is below it, its Motion is impoſſible, and the Air makes as great an Oppoſition as could a Solid

a Solid Body, wherewith you ſhould have firmly ſtopt the Orifice of the Bottle: What is it then that thus obſtructs the Motion of the Water? 'Tis the Air and Water's being in ſuch a Situation, as no Tendency or Attempt whatſoever of the Water can determine the Air, or any other Body, to come and fill its Place in the ſame inſtant that it leaves it: For as ſoon as it can, that is to ſay, as ſoon as you ſhall incline the Bottle a little Side-ways, and conſequently make Way for a little Line of Air, to wind itſelf in by the Side of the Water, the Motion will follow proportionably to the Space that the Air ſhall fill. We muſt not then ſuppoſe that a Liquid Body is ever diſpoſed to yield to the Motion of other Bodies: Nor ought we more to imagine, that when a Body is Solid, and ſurrounded with other Solid Bodies, it never is inclinable to be mov'd, which I thus prove.

Let us ſuppoſe an hollow Globe perfectly full, partly with Water, and partly with a vaſt many little ſolid Bodies, of every Make and Figure, diſpers'd all over this Maſs of Water. Let us conceive all theſe Bodies ſettled and at reſt; being that the Water fills all the Spaces betwixt theſe little Bodies, we imagine the Parts of this Water of all ſorts of Figures, as are the Spaces which they fill. Thus we conceive in thoſe Spaces your little *Globes* of Water, little *Triangles*, little *Cubes*, little *Hexagons*, &c. Let us ſuppoſe now, that Water and all thoſe little Bodies put in Motion.

Making then Reflection on the Figure of the Parts of this Water, before the Motion, we eaſily conceive an Alteration in all theſe Figures, in the inſtant of Motion; that is to ſay, the little

little *Globes* of Water are divided in two *half-Globes*, the *Cubes* of Water loſe their *Angles*, and ſo on. Of theſe little Parts, whether Solid or Liquid, ſome receive more Motion, ſome leſs, and briefly all ſo determine one another, as not the leaſt empty Space is left, but upon one's forſaking of a Place another repoſſeſſes it in the very inſtant: And all this is eaſily perform'd by the proneneſs of the watery Parts to break and diſengage themſelves from one another. Thus in the firſt inſtant of the Motion, we imagine that there happen'd a Change of infinite Figures; that this Change was made only by the Fraction or Separation of the Parts; that that Fraction was occaſion'd by the Motion, and that the Motion was impoſſible without that Fraction: That the Impulſe that ſerv'd to put theſe Bodies in Motion, was the Cauſe of both the Motion and Fraction: That the Fraction of a Part was cauſed immediately, whether by one of the Solid Bodies, or by another part of the Water; for inſtance, the Angle of a Cube was no otherwiſe ſeparated from the reſt of the Maſs, or any other Part to which it was joyn'd, than by another part that ſlipt in betwixt them both, or ſo exactly ſeiz'd its Place, as to fit it to an Hair; and finally that nothing could prevent the Motion and Fraction of the Parts, except ſuch a Situation among themſelves, as rendered it impoſſible for one Part to take the Place of another in the Moment of Deſertion; For all being full before the Motion, it is neceſſary in the Motion all remain full ſtill.

Let us ſuppoſe at preſent, all this Water and all theſe little Bodies reſtated in the ſame Condition they were in before the Motion: And let

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us conceive instead of the parts of Water, that possess'd all the Intervals betwixt the solid Bodies, some other solid Bodies that precisely take up the same Space the Watry parts took up before: Or let us only suppose the Water congeal'd, but without any diminution or augmentation of its Mass. Let us farther suppose, that God made an attempt to move this Matter; and that he indeavour'd at once to divide all its parts exactly in the same manner as the parts of Water, whose place it fills, were divided in the instant of their Motion. I suppose not any Motion yet, but only an Effort for the producing it, and there's no Contradiction in that Effort: But I maintain, that from that Effort or Attempt, Motion and Fraction must inevitably follow: And thus I argue.

From that Attempt which I suppose, Motion and Fraction must needs follow, if nothing hinders: But nothing hinders: For the disposition to Motion and to Fraction is the same in this Hypothesis, wherein I suppose nothing but *solid* Bodies, as it was in the foregoing, wherein I suppose *liquid* Bodies mixt with *solid* ones; and if the repugnancy to Motion and to Fraction, which some imagine in the latter, be invincible, it would be invincible in the former too.

For if in the first *Hypothesis* of *liquid* Bodies mingled with *solid* ones, we imagine the parts so crowded and determin'd, as that one going to move another is unable to gain its place, in the same instant we imagine that the Motion and Fraction of parts can never be: As it happens in the Experiment of the Bottle before mentioned: Because an absolute fulness being sup-

ſuppos'd, all the parts combine in the reſiſtance of the Motion of each Particular: But whilſt we conceive the parts of this Matter ſo puſh'd and determin'd, that ſuppoſing one to move, another in the ſame inſtant takes its place, and another the place of that; thus we conceive Motion and Fraction infallibly muſt follow the Impulſion. But in the ſecond *Hypotheſis* of *ſolid* Bodies, ſuppoſing God to force and determine the parts of thoſe *Bodies* preciſely in the ſame manner, as the Parts of Water had been determin'd in the firſt *Hypotheſis*, at the firſt inſtant of Motion and Fraction; it is plain, that in caſe one move, another muſt inſtantly take its place, ſince it is exactly driven and determined, as the parts of Water was that took that place. Therefore Motion muſt follow in the ſecond *Hypotheſis* as in the firſt.

All the difference lyes in this, that the parts of Water being with the greateſt eaſe imaginably divided, but a very inconſiderable force is required to move them; and the parts of ſolid Bodies being more difficult to be divided, a far greater impulſe would be required to do it: But *M. Deſcartes* has liberty, if he pleaſes, to ſuppoſe this Infinite; and that reſiſtance which God would find, would not be of all the parts in general, againſt the diviſion of each in Particular; a reſiſtance we find inſurmountable in Plenitute that's fluid: But would only be the reſiſtance of each part againſt its own Diviſion, which we can moſt diſtinctly conceive not to come up to invincible.

In a word, the Motion and Diviſion of ſolid Bodies is poſſible *in Pleno*, whilſt we conceive the different parts of theſe ſame Bodies puſh'd towards

wards all parts imaginable of the Space, and so determin'd that upon one's Desertion of a place another immediately fills it: For without this Proviso, Motion is impossible even in Fluids, and with it, it is necessary though in solid Bodies.

Although, said I unto them, this Explication seems to me a true Demonstration, yet I pretend not to recommend it unto you as such. I am satisfied if it only staggers your Opinion of the certainty of the contrary Arguments, ordinarily made use of in this matter; and I question not but that after you have considered it with Attention, you will grant me more than at present I demand.

In effect my *Academicks* seem'd well enough satisfy'd with what I said; scarce above one Scruple more stuck by them proceeding from a Supposal of theirs, that in the first Instant of division you gave a *cubical* Figure to all the parts of Matter. A Circumstance that still blunted their Imagination. To this I answer'd, that would they but reflect on what I had been explaining to them, they would clearly perceive that Circumstance made no particular Difficulty; but throughly to dispossess them of all uneasiness, I assur'd them, you never had made that Supposition, as your own Words might easily convince them; that in your *Book* of *Principles*, you suppose no more than this, That all the parts of Matter were not *Spherical*; and that in your Discourse of *Light*, you give them all imaginable Figures: I farther shew'd them the places, and brought them to confess the little Honesty or Exactness of some Authors, who thus adapted the Exposition of your Doctrin to their Phancy, and the way that lay most advantagious

to

to attack you in. Laſtly, in two or three Words I gave them your own Thoughts and Senſe thereupon, which I always took to be the ſame with this, *viz.* That God in the firſt agitation and diviſion of Matter, reduc'd it into all kind of Figures, which he forc'd and determin'd every way towards all ſides of the Space: That he thereby made a liquid Body; great Portions whereof he after took to move them circularly and make *Vortexes*, wherein the generality of the inſenſible parts that conſtitute them, turn'd round about their Centre; that by this Motion there was made a continual change in the parts of Matter, ſome loſing their Angles, others uniting and linking themſelves to one another. That I, after you, believ'd the ſame thing happen'd every moment among the inſenſible parts of all liquid Bodies; and thence it was that you infer'd the Exiſtence and Diſtinction of your three Elements. I flatter my ſelf *Monſieur*, you will not be much diſſatisfy'd at my Anſwers, and that you will acknowledg that how far ſoever I am behind-hand with the reſt of your *Diſciples* in Parts and Penetration, there are but few that exceed me in the Attention you deſire your Readers to bring with them in entring on your Books, and Application requiſite before they paſs their Judgment, and eſpecially before they venture to oppoſe them or defend them.

But to perſue in giving you the Account of my Conferences: This I have been mentioning had two Effects. The firſt was to break a little our *Peripateticks* of that miſchievous Opinion, they had admitted of your Doctrin, which they had till then regarded as full of Contradictions and

and Abſurdities, abſolutely incapable of Defence, and as a Syſtem that undermin'd it ſelf. The other was, to cauſe two or three of the moſt ſubtil and diſcerning of them, to apply themſelves cloſely to the reading and examination of your Books; whereby they have found Difficulties in earneſt, that ſeem to me to be truly ſo, and upon which, as I at firſt obſerv'd to you, I was forc'd to make my Appeal to you your ſelf. For I muſt confeſs that as Haughty as I was, upon my firſt Succeſs, I am now reduc'd to ſuch a Maze, as makes your Light and Aſſiſtance neceſſary to extricate me thence.

'Tis now a Fortnight that theſe Gentlemen have deſiſted to urge any thing againſt your Doctrin; and three or four Conferences in the *Interim* have paſs'd in the explaining your Sentiments, and reſolving ſome Queſtions they propos'd to me, upon ſeveral particular Paſſages of your Books, of which they thought, at leaſt pretended that they thought, they did not rightly take the meaning. This was only a Stratagem they made uſe of to trapan me. I was well aware of that petty Conſpiracy, which doubtleſs would have given me ſome diſturbance, having to deal with Men of admirable Senſe, had not the goodneſs of the Cauſe I manag'd, bore up my Courage and Reſolution. To conclude, two Days ſince they brav'd it at an high rate; and promiſing or threatning in a ſhort time, to confute the greateſt part of your *Metaphyſicks* and your *Phyſicks*, they told me they would immediately fall aboard the Syſtem of your *Vortexes*: That that was to attack you in the main part; and they queſtion'd not but

they had upon that Article, wherewith to ruin your *Phyſicks* to all Intents and Purpoſes.

Notwithſtanding, whereas they are as Courtly and Obliging, as Ingenuous and Judicious, and beſides were well perſuaded of the difficulty of their Arguments, to ſave me that Perplexity and Confuſion, in the trouble they foreſaw I ſhould be put to, in giving the Solution, they would not oblige me to anſwer them on the place: But were content to give them me in Writing, that I might return my Anſwer at my leiſure: They only read them over to me, to ſee if I comprehended their Senſe; and I proteſt to you, though I ſeem'd to Vapour, I was extraordinary pleas'd in my Mind, with thoſe little Differences which they paid me: For they argu'd only from Matter of Fact and Principles drawn Word for Word out of your Books, which they turn'd one againſt another, and made them deſtroy themſelves in ſo plauſible and probable a manner, as requir'd *M. Deſcartes* himſelf, at leaſt one better skill'd than I am, to refute them. I ſhall tranſcribe the principal things of their *Memoire*, and in their own Expreſſion. They have given it this Title.

Obje-

Objections offered a Cartesian *by some* Peripateticks, *against the general System of* M. Descartes's *World.*

FIRST, they pretend to prove that the Posture and Array in which *M. Descartes* has marshal'd his Matter, or his three Elements in his *Vortexes*, thwarts and contradicts his general Rules of Motion, which he gives himself, and the Properties he attributes to every of those Elements. And thence they'l draw such Consequences as intirely overthrow his Doctrin touching the *Nature of Light*.

Secondly, they will shew that his manner of explaining *Light* is no ways consistent with (not to repeat his Position of the Elements in the *Vortexes*, but) the very dispositon of his *Vortexes* amongst themselves.

Thirdly, they will prove, that by the Principles of *M. Descartes*, the *Earth*, no more than any other Planet, can be priviledg'd with a peculiar *Vortex* in the *Vortex* of the *Sun*. Which being once more Demonstrated, all *M. Descartes's Astronomy* is turn'd topsy-turvy, and the whole *OEconomie* of his *World* utterly routed and destroy'd.

The first Argument.

1. We forthwith take for granted, that Master-Principle of *M. Descartes*, That every Body circularly mov'd constantly endeavours to eccentrick it self, and escape from the Circle it describes.

2. From that universal Principle immediately follows this particular Consequence, that in a *Vortex*, where the Matter of the first, second and third *Element* are circularly mov'd, all three endeavour to acquire a Motion eccentrick to the *Vortex*.

3. We infer yet farther, from the same Principle, another Conclusion, That in that general Attempt, made by different Bodies thus agitated and confus'd, to deviate from the Centre of their Motion, those that are most agitated and are most fit for *Motion*, those, I say, must have the advantage and ascendent over the rest, to gain the Circumference of the Circle the Vortex describes, and consequently to compel the less agitated, and less fit for Motion towards the Centre of the *Vortex*.

Though this Conclusion should have no visible and necessary Connection with the Principle, as indeed it has: Yet we might warrant our use of it, by producing *M. Descartes* to vouch the same thing, in several places of his Books, and particularly in his *fourth Part* of the *Book of Principles*. Where he gives the reason for the Motion of heavy Bodies towards the Centre by this same Proposition. That it was by vertue of that Principle, that in the Vortex

Numb. 23.

of

of the Earth, Terreſtrial Bodies are below the Air, and the Air below the Celeſtial Matter.

To theſe we only add one more that *M. Deſcartes* frequently repeats, eſpecially in the *third* and *fourth Part* of *Principles*, and in the eighth Chapter of his *Tract of Light*, viz. That the *firſt* and *ſecond Element* have much more agitation, and are far more fit for Motion than the *third*, whoſe parts are ragged and branchy, and of a very irregular Figure.

All this ſuppos'd, let us agree with *M. Deſcartes*, that Matter having been created ſuch as he advances, God was able to divide, and actuate it with Motion, and that he effectively has divided it and mov'd it. Let us ſtop now, and fix our Imagination and our Thoughts upon that great Partition of Matter, or upon that Vortex, that hath the polar Star for its Centre. Let us conceive that portion of Matter, made up of an infinite number of little inſenſible Parts it ſelf turn'd round, whilſt all the little Parts are alſo turn'd about their proper Centre.

From this Motion muſt ariſe the *three Elements*, that is, the moſt exquiſitely ſubtle *duſt* of the *firſt* Element, the *little Balls* of the *ſecond*, and the *ramous parts* of the *third*, all which are Parts of the ſame Matter differing from one another meerly by their Figure and their Bigneſs.

Whether the *third Element* be cotemporary with the other *two*, as *M. Deſcartes* ſeems in ſome meaſure to ſuppoſe in his *Treatiſe of Light*: Or, whether it be form'd by the Conjunction of ſeveral Parts of the *firſt Element* hook'd to one another, as he ſeems to teach in the *Book of Principles*: That Philoſopher pretends, that in that

juſtling and concuſſion of Matter, when it hath laſted long enough to break the Angles of moſt of the agitated Parts, the Matter of the *firſt Element* [illegible] be poſted in two principal places. Firſt, in the whole Space of the *Vortex*, where it ought to be diſpers'd, to fill exactly all the Intervals found betwixt the Balls of the *ſecond Element*, whereof the whole Subſtance of the *Vortex* or the Heaven is compos'd; Secondly, at the Centre, whither it muſt be forc'd by the Balls of the *ſecond Element* to deſcend, to conſtitute a Spherical and Fluid Body, which is nothing but the Star it ſelf, that by the circular agitation of its Matter, and the ſtruggle that Matter makes to procure its Inlargement from the Centre of its *Vortex*, thruſts the Globules of the *ſecond Element* that is above it, to all Points imaginable, and communicating by their means that Impreſſion to our Eyes, produces in them the ſenſation of *Light*.

This is the Sum of all *M. Deſcartes*'s fine Doctrin on this Subject. But we offer to demonſtrate to him, by the aforeſaid Principles, which are all his own, that it is not the Matter of the *firſt* Element, but the *third* that ought to conſtitute the *Centre* of the *Vortex*; and thus the Stars muſt not be luminous, nor the Sun any more than they, but all muſt be opaque Bodies, as are the Planets, the Earth, and ſolid Maſſes compos'd of the unactive and almoſt motionleſs Parts of the third Element, entangled and link'd with one another.

The

The Demonſtration.

When ſeveral Bodies or Parts of Matter are circularly mov'd together, thoſe which have the leaſt Agitation, and are leaſt diſpos'd for Motion, are the leaſt able to make their eſcape from the *Centre*. And on the contrary, thoſe that have moſt agitation, and are beſt diſpos'd for Motion, are moſt able to make their eſcape, and compel the other downwards to the Centre. This is the third Principle I have ſuppos'd, after having deduced it from *M. Deſcartes*.

But the Matter of the *firſt* and *ſecond* Element have much more agitation, and are exceedingly better diſpos'd for Motion than the Matter of the third. This is the fourth Principle which *M. Deſcartes* conſtantly ſuppoſes.

Therefore the Matter of the *third* Element, not that of the *firſt*, ought to take up the Centre of the *Vortex*. Which is the Propoſition to be demonſtrated; and is contradictory to that of *M. Deſcartes*, on which he founds his whole Syſtem concerning Light. Therefore the Sun and Stars muſt be dark, not reſplendent Bodies. We charge nothing upon him here, but what is expreſly his own; and we demand at the ſame time by which of his Principles, not knowing what to do with the *Fragments* of the blotches of the Sun, nor what uſe to put them to at the Centre, or near the Centre of the *Vortex* where they are gathered and diſperſed, he makes them wreſt and force themſelves in to the midſt of the Circumference, as branch'd and incapable of

Motion as they are; and conſtitute a ſort of Air, which, according to him, is extended as far as the Sphere of *Mercury* or farther? How comes it to paſs that the *firſt* or *ſecond* Element, that are either at the Centre or near the Centre, or immediately below theſe broken parts, reſign ſo patiently the right they have by Vertue of their vehement agitation and proneneſs unto Motion, to the place the others get poſſeſſion of towards the Circumference? And if once that irregularity and diſorder, ſo oppoſite to the Laws *M. Deſcartes* hath eſtabliſht in his World be tolerated towards the Sun; why muſt a Stone that near our Earth ſhall be caſt into the Air be violently retorted towards the Centre, by the Matter of the ſecond Element below it, under pretence that the Stone hath uſurp'd a place unbefitting its Quality, and only due to the Matter it hath diſplac'd, on account of its vehement Motion?

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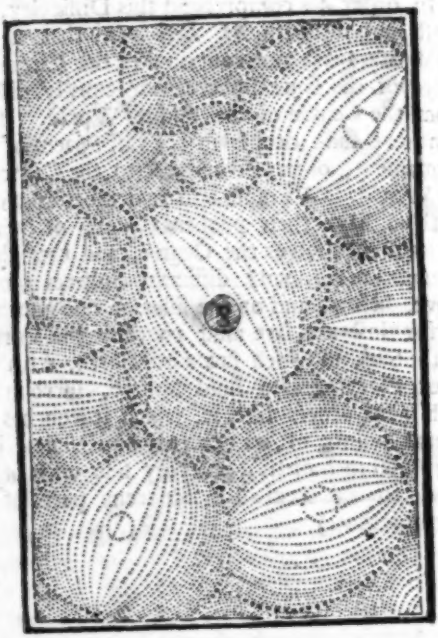
And thus it is that *M. Deſcartes*'s Principles agree. Thus he is ſo very frugal as to make them ſerve for ſeveral purpoſes, even for contradictory Concluſions, with the aſſiſtance of ſome little Compariſons he can well enough manage, to the blinding thoſe that read his Works but careleſly, and are commonly deſign'd for nothing but to diſguiſe his *Paralogiſms*, and put off his Propoſitions that Reaſon cannot juſtify.

The ſecond Argument.

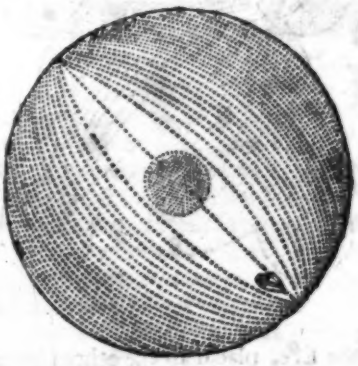
In order to comprehend this Difficulty, we muſt ſuppoſe with *M. Deſcartes*, that all the fix'd Stars are not contain'd in the Circumference of the ſame Sphere, nor equally diſtant from the Centre of the viſible World. That ſome are ſunk deeper in the vaſt Spaces of the Firmament, others dive nearer to the Centre of the World. We muſt alſo remember that each of them have their proper *Vortex*, of which they are themſelves the Centre, and that thoſe *Vortexes* are ſo many different Spheres rang'd above, below, and on the ſides of one another. As for Inſtance, we muſt conceive the Vortex of the Sun, in which floats our Earth, with the other Planets, as a fluid Sphere, ſurrounded with many others like it, which it touches in ſeveral points of its external Superficies, juſt as a Bowl incompaſs'd on every ſide with other Bowls touches them all in different parts of its Circumference.

S *The Vortex of the Sun.*



In the third place we muſt recollect *M. Deſcartes*'s manner of explaining *Light*, which conſiſts in that endeavour the Matter of the *firſt Element* makes at the Centre of the *Vortex*, to get farther from the Centre, whence, preſſing on the Celeſtial Matter, or the ſecond Element in all imaginable Points, that impulſe and that preſſure

preſſure light on all the Lines that reach to the Circumference of the *Vortex*; ſome of which neceſſarily falling on our Eye, when directed towards the Star or Sun, make ſuch a Preſſion and Vibration there, as determine our Soul to that Perception which goes by the Name of *Viſion*.

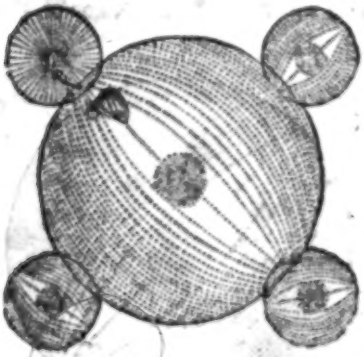


This Figure will eaſily explain it, where the little Points at the Centre of the Circle repreſent the Matter of the *firſt Element*, or the Body of the Star. The Lines drawn out to the Circumference, repreſent the Celeſtial Matter, whoſe Rays concenter in the Eye plac'd at the Circumference of the *Vortex*.

We preſume to affirm, That in this Situation of the Vortexes, we who are in *that* of the *Sun* ſhould not be able to ſee the *Stars*, *Monſieur Deſcartes*'s Principles ſuppoſed.

Let

Let us add to the preceding Figure, four other *Vortexes*, ſuppoſing them the Vortexes of four Stars that are neareſt to that of the Sun.



Let the Eye, plac'd in the other Figure to behold the Sun, be turn'd towards one of theſe *Vortexes*, to behold, for Inſtance, the Star B. wee'l demonſtrate by *M. Deſcartes*'s Principles, that it is not poſſible to be ſeen.

The Demonſtration.

The Eye can no ways obtain the ſight of the *Star* B, but by means of the Rays or Lines of the Celeſtial Matter, puſh'd by that Impulſe the Star B. cauſes in ſtrugling to get from the Centre of its *Vortex*, which Impulſe is communicated to the Eye, by its preſſure and concuſſion of the Strings

Strings of the Optick Nerve. But this is impoſſible, ſuppoſing the Eye placed in the *Vortex* of the *Sun*. And thus we prove it.

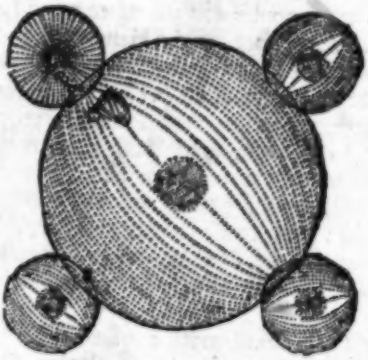
That Impulſe muſt be communicated to the Eye by one of theſe two ways; either immediately by a Ray, or Line of Matter drawn from the *Vortex* of the *Star* and Terminating in the Eye; or mediately by a Line of the *Solary Vortex*, in which the Eye is plac'd, retorted on the Eye by the *Vortex* of the *Star*. As if the Line B, A. of the *Stellary Vortex*, ſhould retort upon the Eye the Line A. C. of the *Solary Vortex*. For it is impoſſible to conceive the *Star* ſhould cauſe any Impreſſion on the Eye but by one of theſe two ways: But neither the one nor the other will ſerve our turn.

Not the firſt, becauſe the *Vortexes*, according to *M. Deſcartes*, have each their circumſcrib'd and ſeparate Sphere of activity, and a Motion altogether different. Inſomuch that the Lines of the one are never blended with the Lines of the other: But end ſeverally at the Circumference of their own *Vortex*; and if once that Communication or rather Confuſion ſhould be admitted, all would ſpeedily return, into that confus'd and diſorderly Chaos, from which *M. Deſcartes* will have his World extracted, by the only Laws of Motion; and farther, ſince there is no point in the *Vortex* of the *Sun*, wherein we cannot ſee the *Star*, the Matter of the *Stars Vortex* muſt neceſſarily poſſeſs all the Space of the *Vortex of the Sun*; than which nothing can be more abſurd.

There remains the ſecond way, which will prove as uſeleſs as the former to *M. Deſcartes*, proceeding on his Principles; foraſmuch as with him

him the *Vortexes*, though unequal perhaps in Bigneſs, muſt be ever equally matcht in Power and Efficacy. For, ſays he, unleſs there was that equality betwixt them, they would infallibly deſtroy each other. Now that equality proceeds from this, that the *Star* of a *Vortex* moving ſtill uniformly round, preſſes the Matter of its Sphere towards the Circumference, and againſt the neighbouring *Vortexes* preciſely with ſo much force as the *Stars* of the other *Vortexes* preſs the Matter of their Sphere in oppoſition to it. Which is the reaſon, according to him, that they always maintain their Ground againſt each other: But from hence alſo we manifeſtly conclude, That the Matter of one *Vortex* is incapable of repelling that of another, or cauſing it to recoil towards the Centre, from whence it ſtruggles and contends to move with all its force, reliev'd alſo with the whole *Poſſe* of the *Star* that puſhes it. Therefore that Effort, the Matter of a *Star* makes to get farther off the Centre, can make no Impreſſion on our Eye, ſo long as it is in the *Solary Vortex*; ſince the communication of that Impreſſion is utterly prevented by the Matter of the *Solary Vortex*, that with all its might and main reſiſts it, and conſequently hinders that preſſure on the Organ, which is the only cauſe of Sight. To explain our ſelves by a compariſon much like that ſo often made uſe of by *M. Deſcartes*. Let us ſuppoſe a blind Man, whoſe Hand ſtirring neither one way nor other, touches the end of a Staff. Let us again ſuppoſe his Hand ſo capacitated and diſpos'd, that for the Perception of the Staff it is not ſufficient that it be immediately contiguous to it, but that there be beſides that Contact,

tact, ſome preſſure of the Staff againſt the Hand. Let us in the third place ſuppoſe another Hand, puſhing it ſtrongly againſt that of the blind Man. Laſtly, let us ſuppoſe that a third Perſon, holding the Staff in the middle, indeavours to withhold it from the Hand of the blind Man, and that this indeavour be exactly equal to that the ſecond Hand makes the contrary way. In this caſe the Staff will advance neither one way nor other, it will make no preſſure on the Hand of the blind Man, and conſequently, according to the firſt part of the Suppoſition, he will not be ſenſible of it.



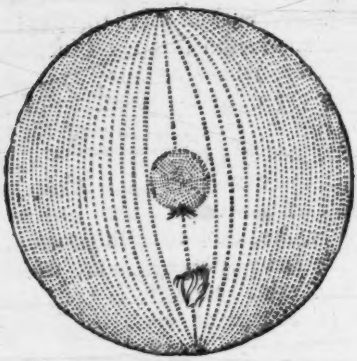
Let us apply this to the Caſe in Diſpute: We will imagine a Line of Celeſtial Matter reaching from the Eye to the Circumference of the *Solary Vortex*. The immediate Conjunction of that Line with the Eye is inſufficient to produce the

the ſenſation of Light, unleſs ſomething more be added. That then which muſt be added, is an impulſe and preſſure of that Line againſt the Eye, which will determine it to ſee; and this is the Doctrin of *M. Deſcartes*. But now whence comes that preſſure in the *Hypotheſis* before us? It cannot proceed preciſely from that Line of Celeſtial Matter, ſeeing it makes a directly contrary Attempt, to withdraw it ſelf from the Eye towards the Circumference of the *Solary Vortex*. It muſt then, if at all, proceed from the Line of the neighbouring Star's *Vortex*, that reflects the aforeſaid Line againſt the Eye. But this making as forcible an Attempt to get from, as that to preſs it on the Eye; it is plain, that Effort and Impulſe can no more reach the Eye, than can the Effort of the Hand that puſhes the Staff, arrive to the Hand of the blind Man; and that the Eye admits no preſſion from the Celeſtial Matter requiſite to cauſe the Perception of Sight: Like as the blind Man's Hand receives no Impreſſion of the Staff, requiſite to excite the Senſe of Feeling, or to cauſe the Perception of the Staff; and conſequently the *Eye*, plac'd in the *Vortex* of the *Sun*, will be as far from *ſeeing* the *Star*, as the *blind Man* from *feeling* the *Staff*.

But for a Confirmation of all this, we muſt remember, that in the Principles of *Deſcartes*, not only what interrupts that Effort and that Preſſure, but alſo what ever weakens or curtails one or the other, conſequently fruſtrates the effect of the luminous Object on the Eye; and thus it is that Philoſopher explains the ſpots of the Sun, or thoſe defailures of Light, that appear in ſeveral parts of the Convex of that Lu-

Luminary. For, according to him, the parts of the *third* Element, hookt and ingendred with each other on the Surface of the Sun, keep the Matter of the *first* Element, of which the Sun is made, from puſhing the Celeſtial Matter towards my Eye, with ſo much force as formerly: Which is the reaſon that the Lines of the Celeſtial Matter, which touch my Eye, and which we ſuppoſe extended to that Matter of the third Element flak'd upon the Body of the Sun, are no longer Rays of Light, that ſhould repreſent to me that part of the Sun as bright as all the reſt. So that the Light, which I perceive in all the Sun beſides, cauſes me to perceive in that part of the Sun a defect of Light, which we call a Spot or Stain. Now it is evident that this Portion of Matter of the *third Element*, that only floats upon the Surface of the Sun, breaks the force, wherewith the Matter of the Sun puſhes the Celeſtial Matter againſt my Eye, much leſs, than if a force equal to that of the Matter of the Sun ſtood determin'd, and fully bent againſt it, as it happens in this Caſe, where the Matter of the *Solary Vortex* withſtands the Effort of the *Star*, and conſequently hinders it from making any Impreſſion on my Eye. And here let *M. Deſcartes* ſhuffle and cut, and make what ſtir he pleaſes to recover his Reader, by an Explication of *Refractions* made in the Rays of the Star, upon their paſſage through the *Vortex* of the Sun; his only Deſign is to lurk and ſecure himſelf in that Darkneſs and Obſcurity with which he purpoſely benights the Queſtion. Let him only tell us what he means by thoſe Rays of the Star that arrive to the Earth athwart the Solary Vortex. But what

we have ſaid will ſufficiently evidence, how groundleſs and trifling will appear whatever ſhall be urg'd thereupon.



But if it be impoſſible to conceive the communication of the Effort and Impulſion of a Star, whoſe Vortex immediately borders on the Suns, what will become of the other Stars, whoſe *Vortexes* are infinitely diſtant from that of the Sun, and which muſt make a ſenſible impreſſion on our Eye acroſs a great many *Vortexes*, whoſe Matter is differently mov'd, and are all ſo many Obſtacles to that Communication? Doubtleſs, though all we have been urging amounted not to a *Demonſtration*, in reſpect of the Stars ſituate near the Sun, it would infallibly, in reſpect of all the other. So that inſtead of thoſe infinite Stars, we ſee ſparkling in the Firmament by night, we ſhould not diſcover an hundred with the beſt Perſpectives.

What

What now if we ſhould add it were impoſſible to ſee the Sun it ſelf? Yet this may be prov'd by the ſame Principles; for no more is requiſite for this, than that the *Earth* ſhould have a particular *Vortex*, whoſe Motion ſhould equalize and reſiſt that of the Celeſtial Matter which the *Sun* puſhes towards our Eyes. But ſo much is true, according to *Deſcartes* himſelf; for he expreſly teaches, That the *Earth* hath a particular *Vortex*, whoſe Matter ſtruggles as much as poſſible from the Centre. That effort is contrary to the effort of the Matter of the *Solary Vortex* on that ſide which is inlightned by the *Sun*. That effort is equal to that of the Matter of the Sun: Otherwiſe the *Vortex* of the *Earth* would run to ruin. Therefore the *Impreſſion* of the *Sun* cannot be communicated to our *Eye*.

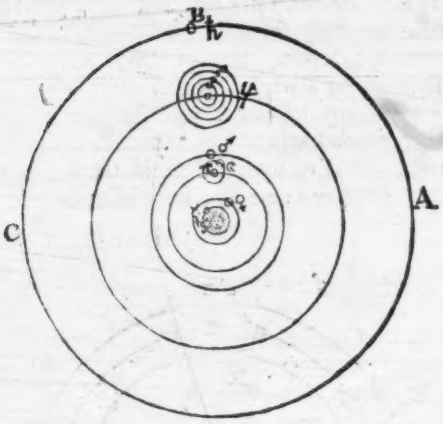
What ſhall we ſay of the *Planets* and *Comets*, which are ſeen by the help only of the reflected Rays of the Sun, and that conſequently are not ſo ſtrong as if they were direct? If the *Earth's Vortex*, arguing on *Deſcartes*'s Principles, is able to obſtruct the latter, how much eaſier is it to obſtruct the former, and hinders us from ſeeing all thoſe Stars?

All this ſeem'd very difficult; and before we turn'd *Carteſians*, we had a mind to be ſatisfy'd thereupon. But one thing yet remains, and perhaps ſomething better than ordinary, upon the particular *Vortex* of the *Earth*, which is Matter of a third Difficulty in us.

The third Argument.

This third Difficulty is well grounded on *M. Deſcartes*'s Principles, and brings ſuch weighty Conſequences againſt the Syſtem of his *World*, as though all the reſt were inſignificant, would alone unravel the fineſt Contexture in it. He ſuppoſes the *Earth* to have a *Vortex* particular to it ſelf in the great *Vortex* of the *Sun*. A Priviledge alſo he confers on *Jupiter*, but denies the *Moon*. He explains this Suppoſition in a plain and very familiar way, exemplifying it by thoſe great *Whirl-pools* we ſometimes ſee in Rivers. In the midſt of theſe great *Whirl-pools* there are ſeveral little ones, that attend the Motion of the bigger, and are carryed round their Centre, and at once whirl Chips and Straws about their own. Nothing could be better thought on for the making us underſtand how the *Earth* and *Jupiter*, when carried about the *Sun* by the Matter of the *Grand Solary Vortex*, at the ſame time cauſe the other *Planets* to circuit about themſelves; how the *Moon* is forc'd about the Earth, and four little *Planets* about *Jupiter*. But as Ill-luck would have it, examining that *Hypotheſis* by the *Principles* of our *Philoſopher*, we found it abſolutely impoſſible.

The

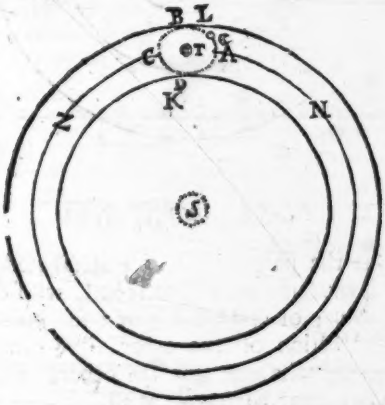


The Demonſtration.

Either the particular *Vortex* attributed to the *Earth* is the ſame with what it had, whilſt yet it was a *Star*; or elſe it is a new one, made ſince the Deſtruction of the other. We maintain that neither the one nor the other can be ſaid. Therefore it can have none at all.

It cannot be that it formerly had. For 'tis *M. Deſcartes*'s Poſition that a *Star* degenerates into a *Planet* or a *Comet*, by the loſs only of its *Vortex*. According to him, a *Vortex* is preſerv'd meerly by its Matter, having as much Motion and Reſiſtance as the Matter of thoſe about it; and its Matter loſes that equality of Motion and Reſiſtance, when the *Star* at the Centre can no longer communicate ſo much by

reaſon of the Scum that covers it. Now the *Earth* is a *Star* not only covered with a Scum or Droſs, but with ſeveral thick Cruſts of an unaccountable Depth. So that it was incapable of preſerving its *Vortex*, which muſt have been quite and clean deſtroy'd, and ſwallow'd up (as *M. Deſcartes*'s Latin Word expreſſes it) by that of the Sun. Let us ſee then if the Earth was able to procure a new one ſince its removal near the Sun.



S *the Sun.* T *the Earth.* A B C D *the little Vortex of the Earth.* N A C Z *the great Orb wherein the Earth is carried round the Sun.*

M. Deſcartes takes this ſame courſe to communicate his Thoughts: He makes this Figure which repreſents the *Vortex* of the *Sun*, in which the Centre S is the Sun it ſelf. The little Circle or *Ellipſis* deſign'd with C. D. B. A. repreſents the lit-

little oval Vortex of the Earth which carries the Moon about the Earth T. The Circle N. A. C. Z. is that which the Earth describes in a twelve Months time about the Sun. The Circle B. and the Circle D. bound and terminate the least Diameter of the *oval Circle* of the *Earth*. Moreover he supposes that though the *Planets* and *Earth* are carried about the *Sun* by the Celestial Matter, yet that Matter moves swifter than the Planets, as the Water of a River runs swifter than the Boats that glide along its Current.

From this Supposition he concludes, That the Celestial Matter ought not only to give the Planets a turn about the Sun, but also about their several Centres, and ought to form it self into little *Heavens* round about them, that shall exactly mimick the motions of the greater.

He makes this second Conclusion, That if *two Planets* chance to meet in the same Circle, *one* of which is little and consequently fleeter than the other, the least upon its Approach ought to fall in with the petty Heaven of the bigger and dance along with it an eternal round. And this (*says he*) is the fortune of the *Moon* in reference to the *Earth*.

Whereas now almost all the *Physicks* of *M. Descartes* rowl upon this particular *Vortex* of the *Earth*, and since this is, as a Man may say, the principal *Wheel* in his whole *Machine*, he had need so to strengthen and establish it, as to render it uncontroverted, and to suppose not the least thing there in danger to be call'd in Question, and that cannot be made good by most solid Reason and Argument: Let us see then how it answers expectation.

He explains his first Supposition, which is the main Support of all the rest, *viz.* That the Celestial

ſtial Matter which carries the *Planet* round the *Sun* moves far ſwifter than the *Planet*. He explains, *I ſay*, this Suppoſition by the *Simily* of a Boat falling down a River, which goes on much ſlower than the Water that flows under it: A plauſible compariſon at firſt ſight, but that has nothing ſolid in it: Since the reaſon of the Boats tardy Motion in reſpect of the Water that forces it along, is wanting in the Planet, ſteer'd in the midſt of the Celeſtial Matter. The reaſon is this, that part of the Boat, which ſtands above the Water, meets with the oppoſition of the Air, which bends its courſe differently from the Water, and conſequently reſiſts the Motion wherewith the Water influences the Boat. And the greater that reſiſtance is, as in a contrary Wind, the ſlower is the Motion of the Boat, in compariſon with that of the Water. And the leſs the reſiſtance is, as when the Wind ſtands fair, the ſwifter is the motion of the Boat: But this is not to be found in the Planet, plung'd in the midſt of the Celeſtial Matter: It preſerves intirely all that Motion the Celeſtial Matter can impreſs upon it, free from all external Oppoſition. Beſides, being of it ſelf indifferent to Motion, or to reſt, to ſuch or ſuch a degree of Motion, to this or that Determination, it offers no reſiſtance, as *M. Deſcartes* himſelf ſpeaks to the Matter of the *Heaven*.

He gives next the reaſon of that inequality of Motion of the Celeſtial Matter, and of the *Planet* carried by it; which is (*ſays he*) that though ſuch little Bodies, as are the inſenſible parts of the Celeſtial Matter, conſpiring all together to act confederately againſt a great one, may be as prevalent as *that*; notwithſtanding they can never

ver move it in all reſpects ſo ſwift, as they are mov'd themſelves; 'cauſe though they are united in ſome of their Motions which they communicate unto it, they infallibly diſagree in others which they cannot communicate. Either we are miſtaken, or this is a meer *Gipſy-talk*, at leaſt in relation to the Buſineſs we are upon; and one of theſe Slights of Hand, we have obſerv'd *M. Deſcartes* from time to time to make uſe of, deſignedly to blind his Reader, and to conceal from him the Lameneſs and Imperfection of a Concluſion neceſſary to his Syſtem; which he is well aware of, but is unwilling any one elſe ſhould ſee. 'Tis but bringing ſome pretty ſort of Compariſon that may prepare the Mind, and ſooth and tame (if we may ſo ſpeak) the Imagination of his Reader, though commonly it never comes up to the ſtreſs of the Difficulty; and then clapping on it for a Confirmation ſome abſtracted Reaſon, that few either can or will take pains to underſtand, and the Buſineſs is done; fore-ſeeing that being half-gain'd already by the Compariſon, they will eaſily ſurrender themſelves to the leaſt appearance of Truth, which he ſhall give them a glimpſe of in his reaſon, that often is a meer fallacy at bottom. And as for this before us: What matters it, though the little Bodies, that drive on a great one, ſhould have ſeveral Motions? What tho' they do not communicate all theſe ſeveral Motions, provided they have ſtill Strength enough to force it on, that the Body makes no reſiſtance, that they all combine, as we ſuppoſe, with *M. Deſcartes*, to communicate the Motion requiſite, and that we conceive them all preſſing on its Surface, ſo as to puſh it towards the place where they

they are puſh'd themſelves? For certainly in all theſe Circumſtances, we muſt conceive it going at as great a rate as they.

And yet from a Principle ſo weakly eſtabliſht as this, he concludes, That the Celeſtial Matter ought to move the Planet round its own Centre, and conſtitute a little Heaven about it, to turn at the ſame time as the great one. But not now to controvert that Suppoſition, as poorly prov'd as it is, let us perſue him in his reaſoning; and to ſee if it be good, let us imagine the Earth T. as it were ſuſpended in a Void, and let us fancy a Circle of Celeſtial Matter as thick as the Diameter of the Earth, that violently ruſhing like a Torrent, carries it ſuddenly away: But as we ſuppoſe this Torrent to be ſwifter than the Earth, methinks without having puzzled our Heads much with the Rules of the Determinations of Motion, we might readily conceive it, upon its violent daſhing againſt the Earth, to be immediately divided in two Parts or Arms, whereof one ſhould run above, the other below it; and whether we conceive this Stream of an equal, or a greater depth, than the Diameter of the Earth, it would diffuſe it ſelf round its Surface, above, below, and on every ſide. Whence it follows, that it would impreſs no Motion on it about its own Centre, but would moreover deprive it of that Motion if it had one; all the Lines of the Torrent counterpoizing one another, and reſiſting the Determinations they ſhould meet with in the Earth contrary to their own.

Here ought to be the foregoing Figure, p. 278.

Now methinks in explaining theſe things thus, it is not a bare *Similitude* that we offer, but a per-

perfect Idea of that which ought to happen in the Motion of the Celeſtial Matter, wherein the *Earth* is carried round the *Sun*,

Wherefore then will *Deſcartes* have the Celeſtial Matter that carries the Earth, and inſiſts againſt its Superficies towards A, making greater haſte than the Earth, bend its whole Current from A to B, not ſuffering half of it to run from A to D? For 'tis impoſſible for things to be, or to be conceiv'd otherwiſe. But if it ought to fall out thus, as queſtionleſs it ought, the Earth no longer has a *Vortex*; ſince the Matter flowing from A to D, prevents that which flows from A to B from returning by C. D. Nothing can be more plain and evident than this Demonſtration.

But let us ſuppoſe *per impoſſibile*, that the Matter when arriv'd at A, ſhould entirely make a double, to run towards B. Would it make a Vortex? No by no means. For advancing from B. to C. and arriving at C. it ought to deviate from the Centre of its Motion, and continue its Progreſs towards Z. The Reaſon given for it in the Principles of *Deſcartes*, is, That this is the very place in all the little Circle it had begun to deſcribe, where it finds leaſt reſiſtance. Firſt, becauſe the Matter it meets in that ſame Point is already on its Motion towards Z. and freely reſigns its place. Secondly, becauſe that which is below it, that is to ſay betwixt D. and C. reſiſts it, and hinders its Deſcent, being more weighty, according to *M. Deſcartes*. And thirdly, becauſe the Circle C Z. is its natural place, according to the ſame *Philoſopher*. It will flow therefore more towards Z. than D. and conſequently make no *Vortex*.

But let us farther ſuppoſe a *Vortex* made, and the Matter continuing its round, from A. to B. from

from B. to C. and from C. to A. would this *Vortex* laſt? Not at all. For we muſt ſuppoſe one of theſe three things: Either that it is ſtronger than the *Vortex* of the *Sun*, that is, its Matter has a ſtronger bent and tendency from its Centre, than the Matter of the *Sun's Vortex* has from his, or that it is weaker; or that they both are equal. If it is weaker it muſt be deſtroy'd by the *Vortex* of the *Sun*. If ſtronger it muſt ruin his. It remains then that its Strength be equal with the Suns: And *M. Deſcartes* muſt unavoidably ſuppoſe it: But how will he prove it to us, I ſay not by a Demonſtration(we will not put him on ſo hard a Task) but how will he bring the leaſt Conjecture to give this Suppoſition a pretence to probability? Cannot we on the other ſide produce ſeveral Reaſons to deſtroy this Suppoſition? Cannot we ſhew, in caſe the *Vortex* of the *Earth* was as ſtrong as that of the *Sun*, and the little *Globules* wreſted themſelves as forcibly from the Centre of their *Vortex*, that the Earth it ſelf would appear a Sun, and ſo would *Jupiter* to boot? Since that which makes the Centre of a *Vortex* to us ſeem luminous, is only the vehement Motion of its Matter? Though *Deſcartes* ſays the Centre would be drain'd of all its Matter, might not we however, imitating the Stile of that *Philoſopher*, compare the Vortex of the Sun quite from S. to D. to a vaſt *Ocean*, whoſe boyſtrous Tide ſwelling, againſt the Stream of a little *River*, by which we illuſtrate the *Vortex* of the *Earth*, obliges it to fall back again, and adds a Determination to its Waters quite contrary to its former? But with *Deſcartes* for a *Vortex* to be deſtroy'd, and for the Matter of the *Vortex* to take the Motion and Determination of another, is one and the

the ſame thing. Let *M. Deſcartes* but *prove* his *Vortex* of the *Earth* with the leaſt part of the reaſon we have brought *againſt* it, or by as natural a Compariſon as we have us'd to demonſtrate it a meer *Chimera*, and he need not fear to ſtand the Teſt, Sallies and Aſſaults, of the beſt of his Adverſaries.

What now if we ſhould fall to examining the Difficulties that may be gather'd from the little *Planet* in particular, I mean the *Moon* conſider'd in the petty *Vortex* of the Earth? Should we probably find leſs Matter of Objection?

Here ought to be the foregoing Figure, p. 278.

We advance no more than this, that ſuppoſing the *Moon* when arriv'd at A. was carried on towards B. ſhe ought to deviate from her *Vortex* in C. For firſt, That's the external Superficies of the little *Vortex*, as *M. Deſcartes* will not deny. Secondly, She Attempts to leave her Vortex, by his grand Principle of circular Motion. He pretends ſhe cannot make her eſcape towards B. becauſe the Matter of the *Solary Vortex* in that place is more light and active, and repels her towards the Centre. Nor can ſhe, according to him, make downwards towards K. for that, ſays he, the Celeſtial Matter on that ſide is heavier than the *Moon*, and equally oppoſes her Deſcent: But we ſay ſhe will get out of her Circle at C. and continue her Progreſs toward Z. For being in C. ſhe finds no reſiſtance, ſince the Matter of C. Z. is that of her own Circle, which is already on its March, and willing to give up its place. Beſides, being in that place, ſhe actually makes an Attempt to get rid of the Centre of

of her Motion, that is to ſay, of T. ſhe therefore will accompliſh her eſcape, ſince there is no Obſtacle in that as is found in the other Points; and being caſt out of her Circle, ſhe will be oblig'd to continue her Journy towards Z. by the Matter plac'd above, and below her in the Circle, for the ſelf-ſame Reaſons as are given by *M. Deſcartes*.

Yet in ſpite of all this, it cannot be deny'd, but that *M. Deſcartes* had good reaſon to order his Suppoſitions of theſe things as he did. His *Syſtem* was too far advanc'd to think of ſtopping at ſo ſmall an Obſtacle as a *Moon*. All the *Grandee-Planets* were plac'd ſeverally, according to the Quality and Preeminence their Solidity had given them. *Madam Luna* too was ſeated in the Circle of the *Earth*. There was only one little Inconvenience in the caſe, which was, that ſhe muſt neceſſarily take a turn about the *Earth*, and conſequently muſt be ſometimes in the Earths own Circle, and ſometimes out of it. She muſt therefore have a little *Vortex* of her own. And this is the beſt, as alſo only reaſon that can be given for his making one on purpoſe: And ſetting this aſide, the Laws of *Statics* alone could never have prevail'd with his Frugality, to put it ſelf to that extraordinary Expenſe.

We had not inſiſted ſo long upon this Article, had not we conſider'd it as the capital Point in the *Carteſian Syſtem*; and as the Foundation of that prodigious Edifice, which has been taken in our days by ſo many, for the compleateſt Maſtery of a Human Mind. Let us ſee the Importance of our *Demonſtration* by the *Corollaries* drawn from it.

Cor.

Conſequences of the preceding Demonſtration.

The firſt Conſequence belongs to *Aſtronomy* and the *Phenomena* of the *Planets*. For firſt of all, there being no ſuch thing as a *Vortex*, the Moon turns no longer round the Earth, ſince, according to *M. Deſcartes*, the only reaſon of her circuiting is the *Vortex* that carries her aloft. Secondly the four *Satellites* of *Jupiter*, muſt be caſhier'd of their Dignity and Employment, which they only injoy on account of the continual *Centry* they keep about him, and that by means of a particular *Vortex* attributed to that Planet, as well as to the *Earth*, in the grand *Vortex* of the *Sun*. For all that we have ſaid of the *Vortex* of the *Earth* and of the *Moon*, ought to be apply'd to *Jupiter* and his *garde du Corps*.

Theſe two Particulars in *Aſtronomy* are conſiderable enough to aſſure us that the *World of M. Deſcartes* is not that of Gods own making, which we live in, but of a very different Architecture and Contrivance.

The ſecond Conſequence reſpects almoſt all the principal *Phenomena's* of the lower World in general, whereof we'l only concern our ſelves with the moſt conſiderable and eaſieſt to be underſtood. 'Tis by the means only of the *Vortex* of the *Earth*, that the *Carteſians*, following their *Maſter*, explain the *gravity* of Bodies, and account for the Motion which they have towards the *Centre* of the Earth. For to inſtance, ſay they, when you caſt a Stone up in the Air, it forces below it a Maſs of the *ſecond Element*, and Air equal to its bulk: But that ſame Maſs has a far greater

greater agitation, and is better disposd for Motion, and consequently has more power to spring fromward the Centre of its *Vortex* than the Stone that scarce contains any thing but the Matter of the *third Element*; and therefore must be compell'd by the Matter of the *second*, to descend towards the *Centre* of the *Vortex*, which is to say, the *Centre* of the *Earth*. We may truly say then, that without a *Vortex* heavy Bodies would not fall downwards, on the contrary they would naturally fly upwards, and thus we should see Miracles and Wonders.

According to the new *System*, the *Sun* as far out of Gun-shot of the *Earth* as he is, could not warrant his own Security, in case there should be a People that inrag'd at the heat and scorching of his Rays, should sometime joyn to give him an innumerable flight of Arrows. For these Arrows shot from the *Earth*, against the Sun, would fall in the circumference of his *Vortex*, and in the midst of the Matter of the *second Element*, which strugling all it can to get farther from the Centre of its Motion, would constrain the Bodies less capable of Motion than it self, to descend towards the *Centre*, that is to say, the *Sun*. Now these Arrows would be Bodies far less capable of Motion than the Matter of the second Element, therefore it would constrain them to fall towards the Sun: Undoubtedly a very surprizing thing. And now we may easily give a reason for the Experiment that *Father Mersennus* formerly assur'd *M. Descartes* he had made; that in discharging a Musquet perpendicularly towards the *Zenith*, the Bullet never came down again; for it must have infallibly been carried to the *Sun*.

Let. 3. Tom. 2.

Ac-

According to this Syſtem, when we have a mind to make a *Voyage*, I do not ſay to the *Globe* of the *Moon* as did *Cyrano de Bergerac*, but to the *Sun* it ſelf, it will be the eaſieſt thing to be accompliſh'd of a thouſand. We need but turn our Head perpendicularly towards the *Sun*, then give a little Spring to put our ſelves in Motion, and to make room for the Matter of the *Solary Vortex*, that would come bounce againſt the Earth, to give our Heels a hoiſe, and this is all; For, according to the Principles of *Deſcartes*, it would give us ſuch a flirt, as in a trice would dart us to that *Luminary*. In ſhort, *heavy Bodies* would no longer make towards the *Earth*, but all would be upon the gallop to the *Sun*.

What ſhall we ſay of the *Flux* and *Reflux* of the Sea; which is one of the choiſeſt places in all *M. Deſcartes* Philoſophy, and on which account there's no one but ought to lament the Misfortune of the *Vortex*? For by the aſſiſtance of that *Vortex*, *M. Deſcartes* and *M. Rohault* ſpeak Marvels upon that inſearchable *Phenomenon* of Nature. Which not only depends upon the *Vortex* it ſelf, but upon the very *Figure* of it, which was made *oval* on purpoſe, and ſingularly for it, though probably it was not at firſt in the intention of the *Philoſopher*. For never did *Tragick Poet* better and more artificially prepare the *Incidents* of his Piece, than *M. Deſcartes* has contriv'd his *Concluſions*. It would ſurprize one to ſee, in his deducing them, that one word, which he let fall careleſs by the way, and one would think without Deſign, ſhould have been big with ſuch an Infinity of Delicate Conſequences. A Man wonders in the third part of his Principles, to ſee the figure of that *Vortex*,

which is no better grounded than the Vortex is it self: But when in the fourth he sees the necessity *M. Descartes* had of it, to explain the *Flux* and *Reflux* of the Sea, he cannot choose but commend his Foresight and Precaution. Not but that, for all these pretty and specious Explications of the Phenomena of the Flux and Reflux of the Sea, the *Cartesian System* may be demonstrated false in that very Particular. We are convinc'd of this by those Reflections and Observations we have drawn from the best *Mathematicians* since *M. Descartes*'s time. They demonstrate by the Observations of the Distances of the *Moon*, determin'd by her apparent Diameters, that that *Planet* is as remote in many of her *Conjunctions* and *Oppositions*, as in some of her *Quadratures*, and as near in some of her *Quadratures*, as in several *Conjunctions* and *Oppositions*. Hence it is false that the *Apogy* of the *Moon* is always in her *Quadratures*, and the *Perigy* in her *Conjunctions* and *Oppositions*. Wherefore it cannot be suppos'd that the *Moon* being in *Conjunction* and *Opposition*, is always in the *little* Diameter of the *Elliptick Vortex*, and in her *Quadratures* always in the *great one*.

And yet it is upon this only Supposition that *M. Descartes* explains, and can explain, the inequality of the Tides in the *Conjunctions* and *Oppositions*, and in the *Quadratures*, as also of those we see in the *Equinoxes* and *Solstices*.

Again, if when the *Moon* pass'd our *Meridian*, the pressure of the Air was remarkably so much stronger, than in an other Hour of the Day, it would be perceivable by the ordinary Experiments of *Torricellus* his Tube. Yet this difference has never been obsery'd, though it must be very

very great: We could ſtill give many other weighty Reaſons againſt this Syſtem: But let it be how it will, take away its *Vortex*, and the *Flux* and *Reflux* muſt needs follow it.

Laſtly, according to *M. Deſcartes* it is the Celeſtial Matter of this *Vortex*, that having more Motion than is neceſſary to turn in twenty four Hours time about the *Earth*, imploys the remainder to diffuſe it ſelf all manner of ways, and together with the Matter of the *third* and *firſt Element* cauſes that great variety of Effects and Bodies which we ſo much wonder at. So the Vortex being ruin'd, all goes to Wreck and Confuſion, and returns to its Native *Chaos*. Wherefore it makes not only for the glory of *M. Deſcartes*, but for the Intereſt of all Mankind to ſave this *Vortex*. For what remains, we proteſt we ſhould be wonderful glad to ſee the Solution of the Difficulties we have propos'd againſt this and the other Points, upon which we ſhall reſign our ſelves intire and ſincere *Proſelytes* to *Carteſianiſm*.

But in anſwering us let no one think to put upon us, nor quote a place in *M. Deſcartes*, to convince us he has not contradicted it in another; when 'tis a plain and notorious Caſe. That Wheedle might take with thoſe that have but perfunctorily read his Works, but muſt ſhew them the Contradiction in a clearer Light, that ſhall take pains to compare the oppoſite places. We farther deſire ſuccinct and neater Anſwers, than the generality of thoſe himſelf hath formerly given to thoſe many Objections, propos'd againſt his *Metaphyſicks*. Thoſe very Anſwers raiſe in our Minds more Scruples than they cure: And yet becauſe they have been

Printed, ſet off and tinſell'd with High-ſtrain'd Praiſes of the Author, becauſe he gives them a Magiſterial and uſually a diſdainful Air, and we never ſee any Replies affix'd to them, many are habituated to reverence them as *ſecond* Oracles, wherewith he hath confirm'd and explain'd thoſe *former* of his own pronouncing. We ſhall not be ſuch tame Aſſes, as to be impos'd on by *M. Deſcartes*'s Reputation and Authority, no more than we would be Vaſſals to the eſteem we have for ſome of his *Diſciples*. We praiſe and highly approve the Advice he gives thoſe who are on the Inqueſt after Truth, to beware of Prejudices, and ſhall put in Practice. Theſe, *Monſieur*, are the chiefeſt of the things contain'd in my *Peripatetick Memoir*. They added ſome few others by word of Mouth, as for Inſtance; That you would have been moſt horribly peſter'd if any one would have track'd you ſtep by ſtep, in the *fourth Part of your Book of Principles*, eſpecially from *Number* 32. to 45. where you are ſo particular, in poſturing and diſpoſing thoſe parts of the *third Element*, of which you form your *Earth*: That there were many things there unſatisfactory to the Mind, and that there was not a Page wherein it might not be reaſonably again and again demanded, why ſuch a thing ought to be rather ſo than otherwiſe, without your being able to give a tolerable Reaſon for it: That they believ'd that piece of your *Phyſicks* was one of thoſe that had moſt contributed to make your Philoſophy paſs with many for a perfect Fable, ill-digeſted and not well hung together: And that your Adverſaries, without troubling themſelves to refute the Propoſitions that you make there, the Diſcuſſion

where-

whereof must needs be very tedious, had no more to do, than to refer your Readers to the place, to make them as ill-satisfied with you as can be wish'd.

They proceeded farther to say, you us'd to attribute *Properties* to your Elements, which you was sure to take away again when they were not for your purpose. They gave me an Instance in the Matter of the *first Element*: You attribute as a Property to that Matter a great facility of division and readiness to change its Figure, so as easily to insinuate its self in every place, and fill all sort of Space whatever. But when 'tis brought for the Explication of the Nature of the Loadstone, that Propriety growing disadvantagious, *Descartes* thinks fit to change it for a contrary. There is occasion for a *little Vortex* of chamfer'd Matter round the *Earth*, and about each particular Loadstone, to give a Reason for

the Qualities of that miraculous Stone. These
Part 3. principl. *chamfer'd* parts belong to the *first Element*. It formerly was nothing to them to accommodate themselves with the Figure of a *Skrew*, to pass and repass betwixt the Globules of the second Element. And now in issuing from the *Earth*, or from a *Loadstone*, the parts of Air are able to detain them. Instead of breaking and proportioning themselves to the Figure of the Parts of Air, and second Element mingled with it, they flock and settle in heaps about the *Earth* and about the *Loadstone*, where they constitute a *Vortex*. Those that enter by the Southern Pole are incapable of passing by the Northern, since their Figure can no longer be adapted to that Passage; and they farther demanded, upon that occasion, how it was possible those Snail-work'd Parts, confin'd and stopt thus in a definite Space, having an intricate and confus'd Motion, one amongst another, approaching the *Pole* of the *Earth*, or *Magnet* that was proportion'd to them, could so conveniently turn themselves an end, and present so cleverly their Point against the Pores, in order to their entrance in those Bodies. They pretended the contrary was more likely, and that generally the parts would present themselves across, and thereby make a Confusion capable of stopping all the rest, and damming up the Pores of the *Earth* and *Magnet*, so as to frustrate all those admirable Effects we see there. They advanc'd one *Paradox* more, which was a good Humour enough. Hitherto, said they, the most rational Philosophers have acknowledg'd, that no Physical Argument could be brought against *Copernicus*, to prove the Earth was not turn'd about its Centre. But *M. Des-*

cartes

cartes who sides with that *Astronomer* in his *Hypotheſis*, has furniſh'd us with a very concluſive one againſt that Motion. His topping Principle is, That every Body circularly mov'd, attempts to wheel off the Centre of its Motion: This Principle is true: He thence concludes, that the *Earth* turning on its *Axle*, would fly in Pieces, unleſs the Bodies, of which it is compos'd, were cloſely preſs'd, and ſqueez'd againſt one another by the Matter of the *ſecond Element*. This Conſequence is moreover evident in his Syſtem: But now let us ſee if that preſſure of the Matter of the ſecond Element is ſtrong enough to overpower the Effort which the Parts of the Earth make to diſengage themſelves and get further from their Centre. This difficulty, ſaid they, falls only on *M. Deſcartes*: For the School-Opinion is ſo far from owning ſuch a Propenſity in the parts of the Earth, to deviate from the Centre, as to ſuppoſe a quality and inclination that naturally buckles them unto it. Now upon comparing the preſſure of Terreſtrial Bodies one againſt another, by the Matter of the ſecond Element, with the Effort Terreſtrial Bodies make to get far off the Centre, the Effort muſt ſurmount the preſſure: For the Effort is as great as the Motion that cauſes it, and the Motion is very great indeed, that can carry the Earth ſeveral Leagues each Minute; and on the contrary, Experience ſhews there needs but a very little Effort for the conquering the preſſure, ſince no greater is requiſite, than that a Child of four years old imploys in Walking, to lift his Foot and ſeparate it from the Ground, whereto the preſſure of the ſecond Element did faſten it. Wherefore it ſeems to be reaſonably concluded,

That the Earth turns not on its Axis, since if it did, we should all be hurl'd in the Air, pursuant to *M. Descartes*'s Principle, which yet at bottom is true in sound Philosophy. Thus *this* System affords an excellent Argument against *that* of *Copernicus*.

They yet farther observ'd to me some peculiar Places and Points of your System, of the greatest Importance, which you advance, as they pretend, not only stript and naked of all Proof, but against all Reason in the World; they particularly intreated me to read considerately and without prepossession, the *second Number* of the *fourth Part* of your *Book* of *Principles*, where having explain'd how the *Vortex* of the *Earth* was destroy'd, and how there grew round that cak'd and crusted *Star*, a spacious *Fleece* of Air, you not only plunge it a great depth in the *Solary Vortex*, but also make that Sphere of Air keep pace, and wait upon it thither, and ever incompass it as it still descends. They pretend that Supposition which you throw in *Gratis*, and without all Confirmation, is inconceivable; and yet if it be false, it were impossible at present to have Air about our Earth: It is inconceivable, say they: For, according to *M. Descartes*, the Air is nothing but an heap of the Parts of the *third Element*, exceeding small, and very loose and disunited from each other, and extraordinary obsequious to the Motions impress'd on them by the Globules of the second Element, in which they swim. But this being so, how comes it to pass the *Earth*, traversing those immense Spaces quite from its setting out, at the brink of the *Solary Vortex*, to the place in which it is, should still so preserve all the *Air* about it?

How

How by the *Principles* of that *Philoſopher* could that Maſs of Air, being far leſs ſolid than the Maſs of *Earth*, have the ſame Motion, the ſame Determination, and ſame Swiftneſs as the *Earth?* How chance thoſe little Parts ſo looſe and independent of each other, and ſo obedient to the Motions of the Celeſtial Matter, have not been diſpers'd by the rapidneſs of that Matter, which they ſtemm'd, as the Duſt is ſcatter'd by the Wind? But added they, how is this Maſs of Air at preſent driven along with the Earth by the Celeſtial Matter? How has it all the ſame Motions? Is it againſt the Body of the Earth, or againſt the Globe of Air the Celeſtial Matter preſſes, to give both one and the other a Diurnal and an Annual Motion? Would not a *Copernical Carteſian* be hard put to't to unperplex himſelf of this Affair?

I omit, *Monſieur*, many other Difficulties whoſe Solution probably I may find in the Anſwers your Goodneſs will, I hope, vouchſafe the others I have already noted in this Letter. But for what remains, I deſire you to take the earneſtneſs wherewith I write to you, as an effect of that paſſionate Love you have inſpir'd me with, of Truth, and eſpecially to put a favourable Conſtruction on my meaning. I have only tranſcrib'd your *Adverſaries Memoire* in their own proper Terms and Language, and I preſum'd the reſpect I ow'd you, could not warrant my concealing or diſſembling their inſulting way of arguing. Which will ſerve to let you know how much it is for my Intereſt, and the Honour of our Sect, not to ſuffer them to triumph long.

The

The great and important Buſineſs, the *production* of a *new World* at preſent finds you, joyn'd to the indifference you have always had, and ſtill have more than ever, for the Opinions and Thoughts of Men, might reaſonably make you neglect and deſpiſe theſe mean and trifling Things. But thoſe extraordinary Inſtances you have given me of your Favour, encourage me to hope you will have ſome Conſideration of my Honour, and will not deny me your Hand to raiſe me from the Ground, where I muſt own my ſelf a little foil'd and diſheartned. I deſir'd the *Reverend Father Merſennus* to imploy his Credit with you, to obtain this Favour, and at once to aſſure you, as I here do, with all the Submiſſion and reſpect I am capable of, that I am with all my Heart and Soul,

MONSIEUR,

Your moſt humble, and moſt obedient Servant, and moſt zealous Diſciple.

The

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